

## TRACEMAN HD *User Guide*



### TRACEMAN HD IMAGE SCANNING & LINE TRACING TOOL

RETAS! PRO is a graphic software which brings epoch-making progress for the animation fields  
having been in analog technique so far into the digital realm.  
Various functions and easy operation tools bring you the highest quality and efficiency that respond to professionals' strict demands.  
Using this software, you can express your own imagination world just easily.  
RETAS! PRO is the professional standard software for creation of animation project.

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Explanatory note:

Key operations

Windows

Unless otherwise noticed, applies to all Windows models mentioned in the system requirements.

Macintosh

Unless otherwise noticed, applies to all Macintosh models mentioned in the system requirements.

 **[Ctrl]** /  **[command]**

[Ctrl] (Windows) / [Cmd] (Macintosh)

 **[Alt]** /  **[Option]**

[Alt] (Windows) / [Opt] (Macintosh)

Unless otherwise noticed, the above operations are equivalent in both Windows and MacOS.

 **[Esc]**

Interrupts a command or operation in process.

About keyboard shortcuts

Example: [Ctrl] + [S]

Press [S] key with the [Ctrl] key held down.

Example: [Ctrl] + [Shift] + [S]

Press [S] key with both [Ctrl] and [Shift] keys held down.

About the mice

Left click / Click

Left click (Windows) / Click (Macintosh)

Right click / [Ctrl] + Click

Right click (Windows) / Click with the [Control] key held down

Unless otherwise noticed, the above operations are equivalent in both Windows and MacOS.

b

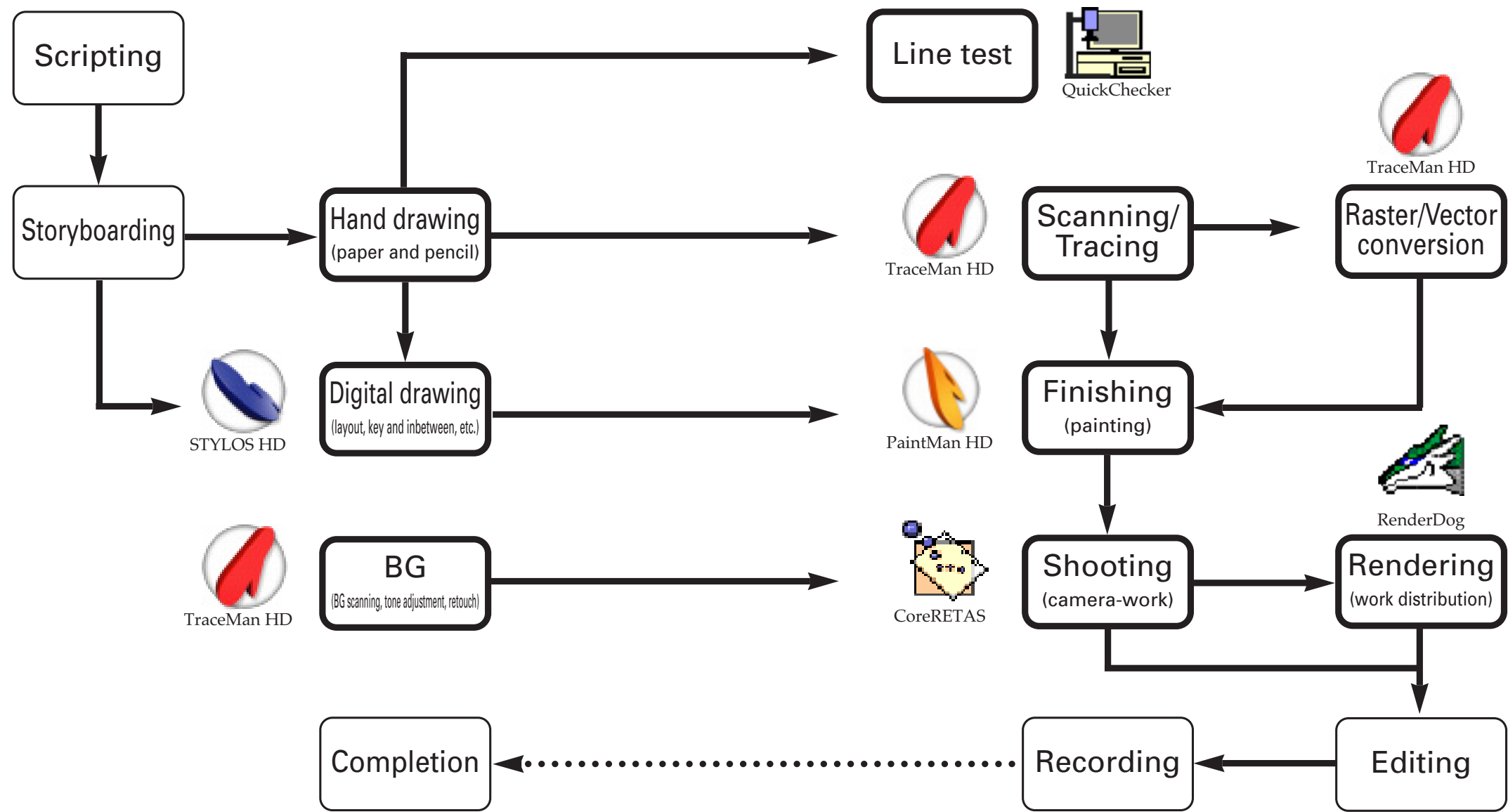
RETAS!PRO

# *Chapter* **1**

## **Introduction**

# Workflow with RETAS!PRO

The position each of the RETAS!PRO applications occupies within an animation production workflow is as follows.

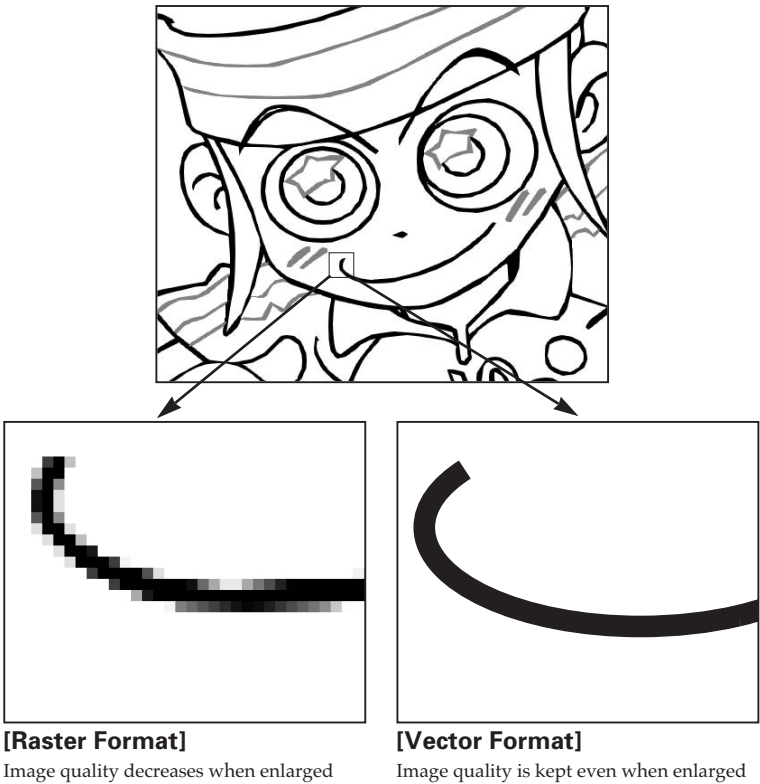


(as of February 2006)

# RETAS!PRO basic system

## Raster and Vector Formats

RETAS!PRO supports both raster and vector formats: raster for drawing simple but delicate lines, and vector for reducing or enlarging the image according to the use.



### 1. Raster format (bitmap image)

In this format, an image is drawn using tiny dots. It is appropriate for representing subtle gradations.

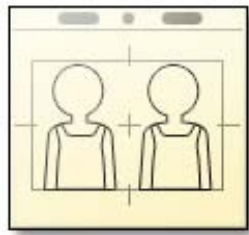
### 2. Vector format (vector image)

In this format, an image is drawn using lines whose detail and sharpness do not change with size. It is appropriate for giving the image a different use by reducing or enlarging.

## Multi-layered Image

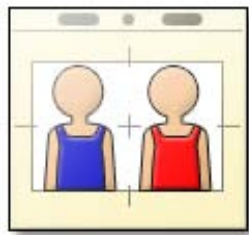
RETAS!PRO uses "layers" for managing images, where layer is an equivalent of the animation cel representing an image part such as outlines, color separation lines, etc. This management on a part basis makes possible the function that protects the outlines from being painted, and makes correction easy.

DGA format (Digital Graphic for Animation, extension: \*.dga)



The multi-layer structure of RETAS!PRO is such that allows you to use both vector and raster formats on the same image.  
This image format can be used only with STYLOS HD, the digital drawing software application.

CEL format (cell, extension: \*.cel)

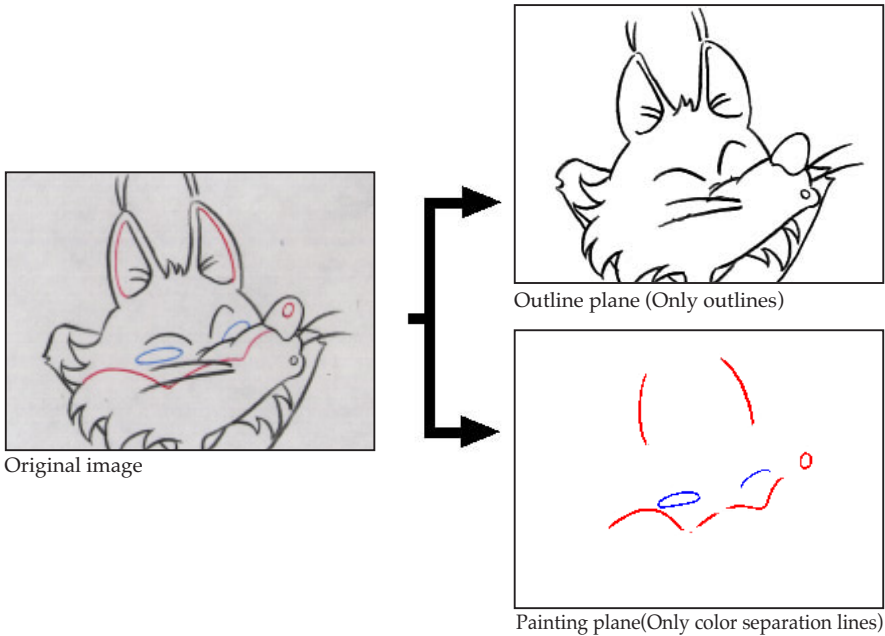


The multi-layered structure of RETAS!PRO allows you to have both vector and raster formats used on the same image.  
This is an image format used mainly in post-finishing processes.

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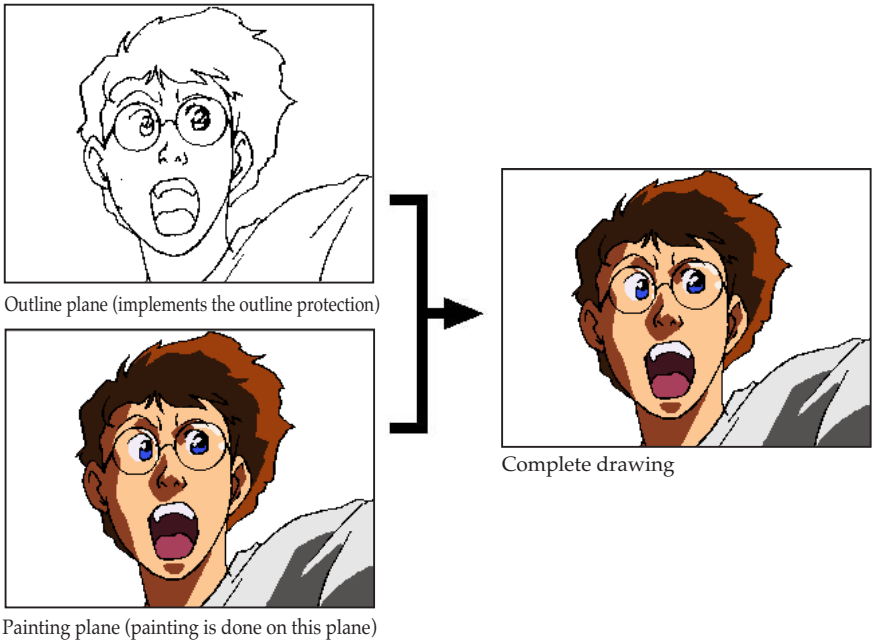
Trace (TraceMan HD)

Trace is a TraceMan HD function that separates lines from the other parts from the image of a hand drawing using paper and pencil to make it suitable for digital painting.



Outline Protection (PaintMan HD)

This function places the outlines on a separate layer so that correction of lines and painting can be done separately. This function simulates the way the cels are actually used.



Tips

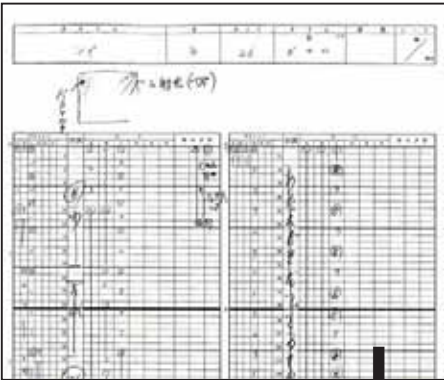
There are 3 types of trace:

- Mono trace,
- Gray trace, and
- Vector trace

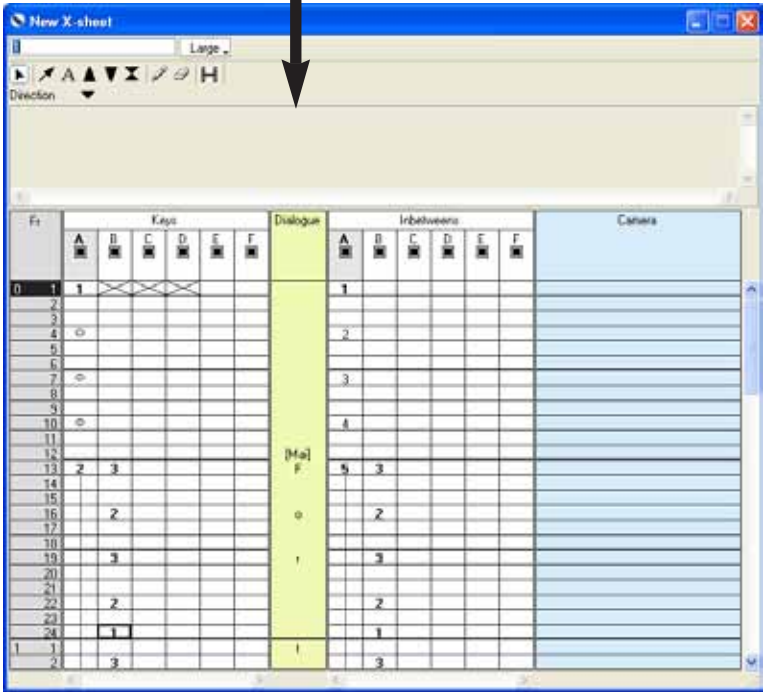
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Longitudinal X-sheet

The X-sheet is for managing the timing of inbetweens and BGs. This longitudinal X-sheet simulates the standard longitudinal X-sheet used in the Japanese animation industry.

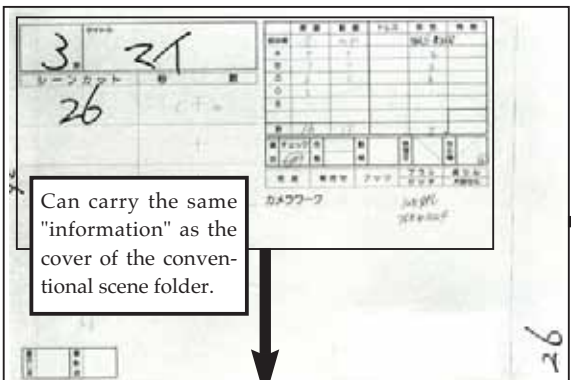


Previous X-sheet



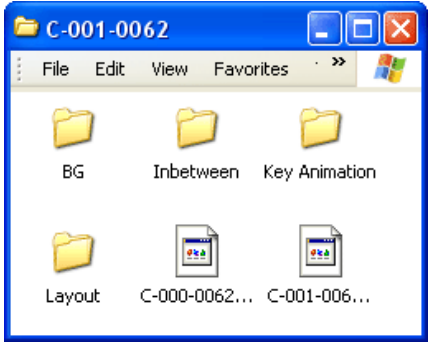
Storage folder resembling conventional scene folder (Scene Folder)

The "Scene Folder" is a software storage folder that simulates the conventional scene folder made of paper used in the animation industry to manage the layouts, keys, inbetweens, BGs, and X-sheet (\*.sxf).



Conventional scene folder

The Scene Folder can manage "everything" that might be included in the conventional scene folder.



Scene Folder content

Tips

There are two types of [Scene Folder]:

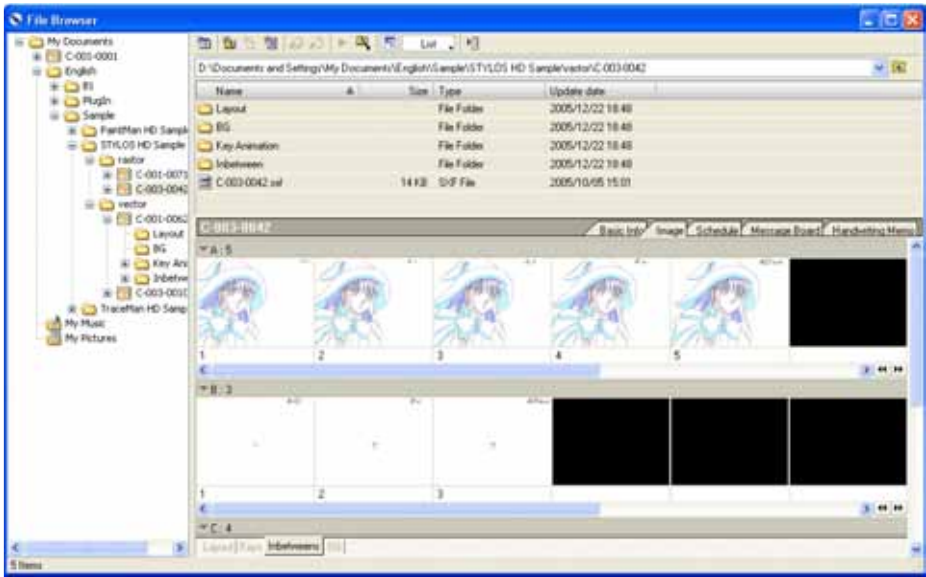
The **[Drawing Scene Folder]** to keep the layouts, keys, inbetweens, and BGs used by STYLOS HD, and

The **[Cel Scene Folder]** to keep only the inbetweens used by TraceMan HD and PaintMan HD.

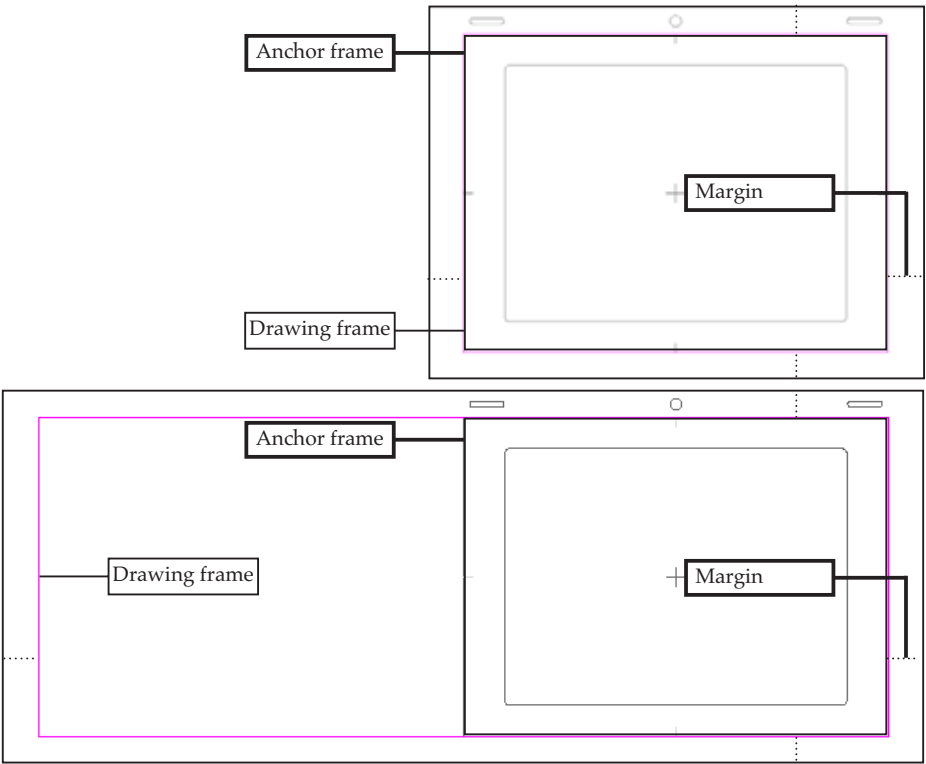
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File Browser

This is a function for showing a list of X-sheets, layouts, BGs, keys, and/or inbetweens and browsing, or searching.



Anchor Frame and Margins



[Anchor Frame] and [Margin] has been introduced into all of the RETAS!PRO HD series applications.

1. Anchor Frame

The anchor frame replaces the peg holes used for positioning the frames. In RETAS!PRO HD, each image is embedded with an "anchor frame" which is used instead of the pegbar to keep the position of images when loading them to the Light Table or when overlapping them in a Cel Stack.

2. Margin

Margin is the part outside the drawing frame. RETAS!PRO HD calculates the appropriate margin based on the "drawing frame" information embedded in the image to allow you to make use of the margin related functions.

Tips

You can use the [File Browser] to register scene information, schedule management information, messages as well as handwritten memos.

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RETAS!PRO

# *Chapter* **2**

## **Main Features**



# Evolution Towards the HD Era



### Support for Raster and Vector Formats in All Applications

- Up to the previous version, all RETAS!PRO applications except STYLOS supported only raster images.
- In the new generation RETAS!PRO, all applications are capable of handling mixed raster and vector images.
- You can choose between "vector format" for dealing with enlargement or reduction, or "raster format" for representing simple but delicate lines depending on your needs.

### Scalability: from High Resolution HD Image to Low Resolution Web Animation

- Images in vector format can be used to realize "one-source, multi-use" which allows you to use the same original material in a wide range of applications with different requirements on resolution.

### Deep Depth of Color: 16 bits for each RGB channel

- HD images require not only high resolution but high quality color as well.
- Effective for limiting the image quality deterioration at tone adjustment caused by the appearance of Mach bands.

### Introduction of proprietary formats

- The RETAS!PRO proprietary DGA format (for drawings) and CEL format have been added to deal with the above mentioned functions.
- The DGA format can be used only with STYLOS HD, the drawing software application while the CEL format can be used with all other RETAS!PRO series applications except STYLOS HD.

### Anchor Frame

"Anchor frame" is a concept introduced to position papers of diverse sizes correctly. With the anchor frame, the software is able to position correctly even when a mix of papers of diverse sizes is present.

### The "Margin" Concept

The introduction of the "margin" concept similar to that in real papers allows you to use images drawn on the margin effectively.

### Virtual Memory Engine

- An own virtual memory engine is implemented in the application, apart from the one implemented in the OS.
- This own virtual memory engine speeds up both the operation and response of each of the applications.

### Multiple Undo-Redo

- Multiple operations can be undone and redone.

### Shortcut Customization

- The keyboard shortcut assignment can be edited.

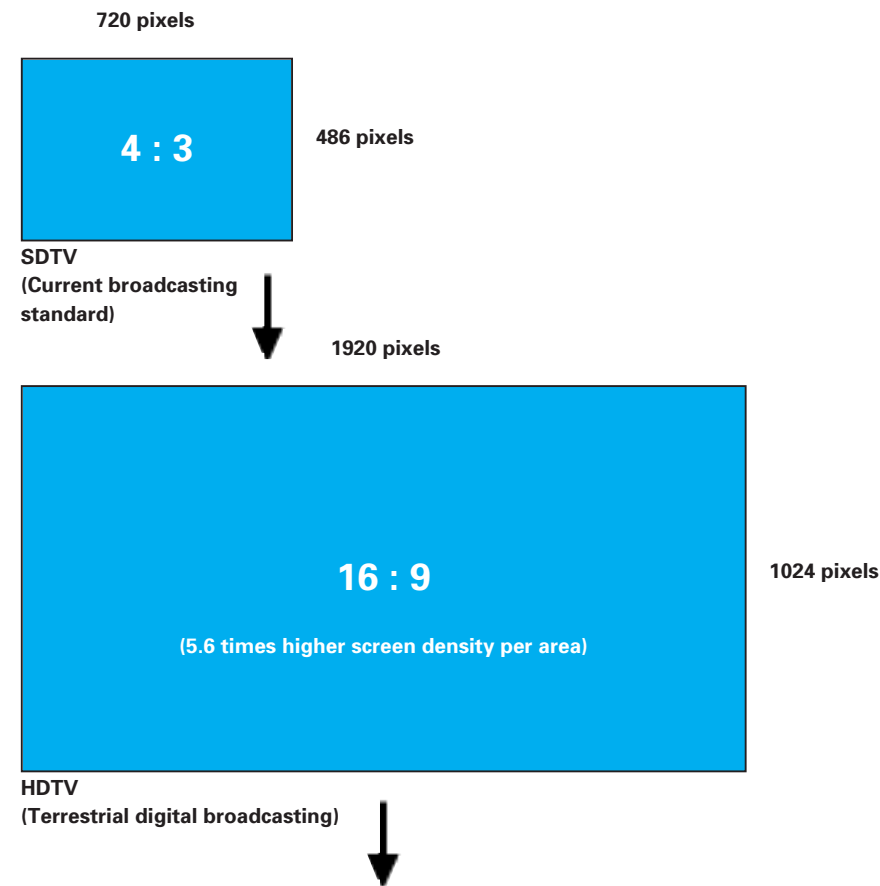
### Browser Window

- A file browser with links to the Scene Table, Direction, and Message Board has been implemented to facilitate selection of files and folders, selection of the saving location, and file operations.

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# RETAS!PRO HD Main Features

Tool for creating high resolution, high quality video image required by HD



Possibilities will become limited if working only with conventional raster-based images

RETAS!PRO two approaches for dealing with the HD era

- Vector image: all RETAS!PRO applications handle vector images in addition to the raster images.
- Better screen presentation because of the support for 16 bits/ channel and enhancements in the special effects.

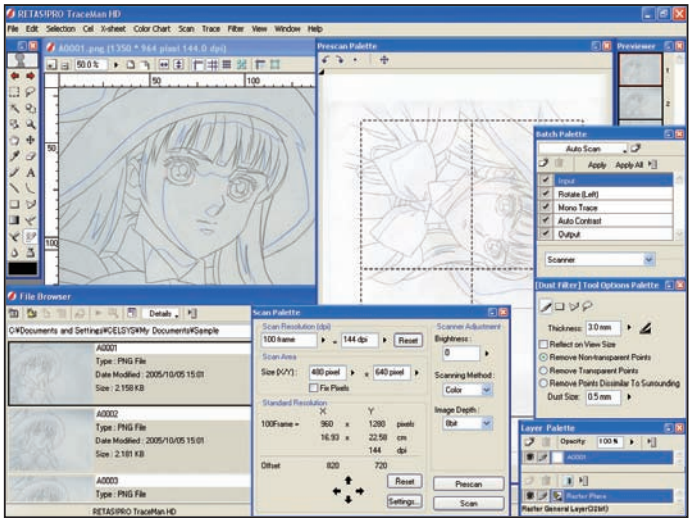
One-source, Multi-use: from cinema animation to web animation

| Reduced!                           | Enlarged!        |
|------------------------------------|------------------|
| Wireless content delivery services | HDTV             |
| Flash animation                    | Cinema animation |
| Streaming                          | Publication      |

Vector images created with the RETAS!PRO HD series are scalable; allowing you to give the material a second use (multiuse), a fact of ever increasing importance in the animation industry.

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# TraceMan HD: Main Features



## TraceMan HD: Basic Functions

### "Trace" function for making an image suitable for painting

- "Trace" is the name given to the operation that converts a scanned image made of widely variable grayscale pixels into an image suitable for animation cel painting.

#### 1. Mono trace

- Separates the outlines of characters and the paper into different layers.
- Identifies up to 6 color separation line colors.

#### 2. Gray trace

- Allows you to reproduce delicate lines because the function can identify automatically and extract the line components with the outline's grayscale information kept.
- Identifies up to 6 color separation line colors.

### Precise framing for animation

- Allows you to scan large amounts of inbetweens (as it is the case in animation) always with the same frame and precisely.

### Operations for handling large amounts of inbetweens easily

- Functions such as "Automatic cel number increment" and "Auto scan" make it easier to scan large amounts of inbetweens.

### Batch processing (automatic processing)

- Repeated execution of the same operation over a large amount of image files can be done using the "batch processing" function.

### Image processing functions

- Provides image processing functions necessary for adjusting the scanned images.
- Allows you to adjust nature painting for BG, for example, to an image of quality close to the original.

## TraceMan HD: New functions

### Inbetween tracing

- All three methods: [Mono Trace], [Gray Trace], and [Vector Trace] can be used with inbetweens.
- Allows you to convert raster image into vector format.

### Deep depth scan

- Support for 48-bit deep depth scan (that is, with 16 bits for each RGB channel)
- Support for 48-bit tone adjustment command
- Keeps image quality deterioration at BG tone adjustment to the minimum, for example.

### Improved tone adjustment

- Sharpen {Sharpen (heavy), Sharpen (light), Unsharp mask}, Blur {Blur (heavy), Blur (light), Gaussian blur}, Invert, Auto contrast, Brightness/Contrast, Tone Curve, Level Adjust, Hue/Saturation, Color balance, Dust filter.

### Enlarged prescan palette

- Allows you to view a precise preview on an enlarged prescan palette.

### Enlarged mono trace preview area

- Preview using the image in the window.

### ADF support

- Automatic loading of drawings on paper using ADF.
- Positioning using the coordinates calculated based on the inbetween drawing paper holes.

### Improved batch processing

- In addition to the tone adjustment, Image resizing, dpi setting, reversing (flip horizontal and vertical), and rotation (left and right) can be specified as batch processing item.

### Editable X-sheet

- X-sheet assemblage is possible even at the scanning stage if separation into layers becomes necessary during scanning.

### Editable alpha channel

- Transparency can be set using the image's alpha channel.

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Backward compatibility

Backward compatibility (data exchange with previous versions)

- RETAS!PRO HD series is NOT a software that only handles proprietary (DGA, CEL) formats.
- RETAS!PRO HD series is designed with consideration to compatibility with older versions both from data and workflow point-of-view which are very important to the studios producing animation professionally.

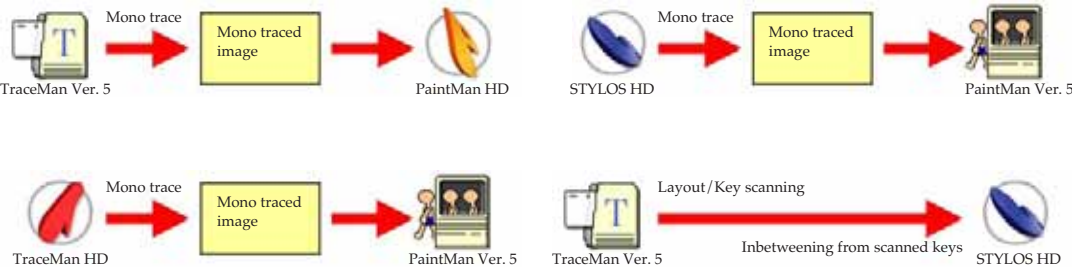
Possibility of using the conventional mono traced image workflow only

- RETAS!PRO HD can be placed in a workflow implemented with older versions of RETAS!PRO, or place Ver. 5 series in a workflow implemented with RETAS!PRO HD by limiting the used images to mono traced images in general image format (e.g., TGA).

Support for mixed conventional and HD series environment

Migration from older versions to HD series can be gradual.

Example: Either of the following workflows is possible.



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RETAS!PRO

# *Chapter* **3**

## **Quick Guide**

# Preparations

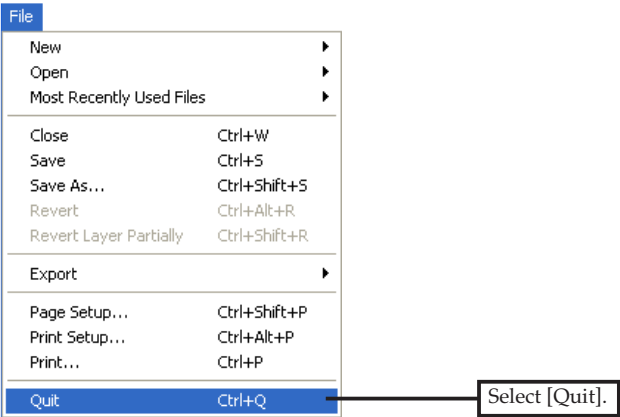
## Starting TraceMan HD

To start, double click the TraceMan HD icon. The startup screen appears when the application program starts.



## Quitting TraceMan HD

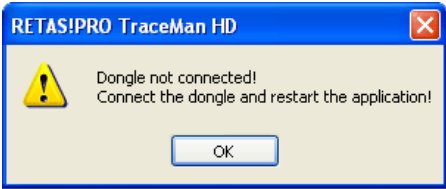
To quit, select [Quit] under [File] menu (Windows) or under the application menu (Macintosh).



(Example from Windows.)

## Dongle check

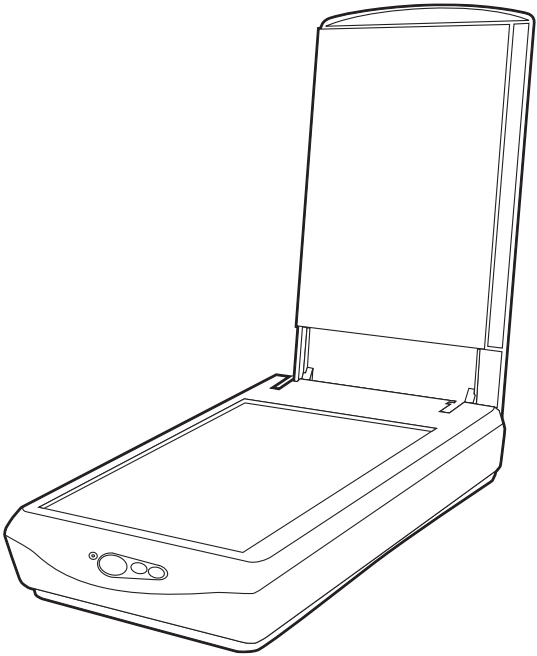
If the following warning dialog box appears instead of the startup screen, quit the system and check whether the dongle is inserted correctly.



## Connecting a scanner

Connect the scanner and install the scanner driver.

\* For details, refer to the scanner documentation.



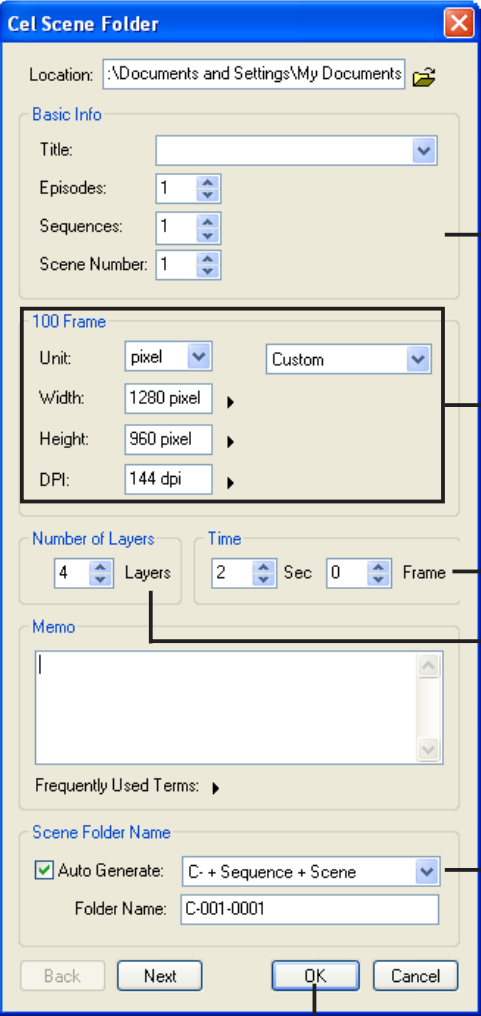
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Creating a save folder

Firstly, create a folder for saving the images to be drawn with TraceMan HD by following the procedure below.

1. Open the New Scene Folder dialog box

Select [New] → [Scene Folder] from the [File] menu. The Cel Scene Folder dialog box appears.



The Cel Scene Folder dialog box is shown with various input fields and sections. It includes a Location field, Basic Info section with Title, Episodes, Sequences, and Scene Number. It also has a 100 Frame section for Unit, Width, Height, and DPI. Other sections include Number of Layers, Time, Memo, and Scene Folder Name with an Auto Generate checkbox.

1 Enter the title, number of episodes, number of sequences, and scene number in [Basic Info].

2 Enter the  
• Screen width and height  
• DPI  
for the 100Frame.

3 Enter the time length of the scene.

4 Select the number of layers (the number of cels to overlap).

5 Select the [Auto Generate] check box to generate the folder name automatically from the sequence, the scene number, etc.

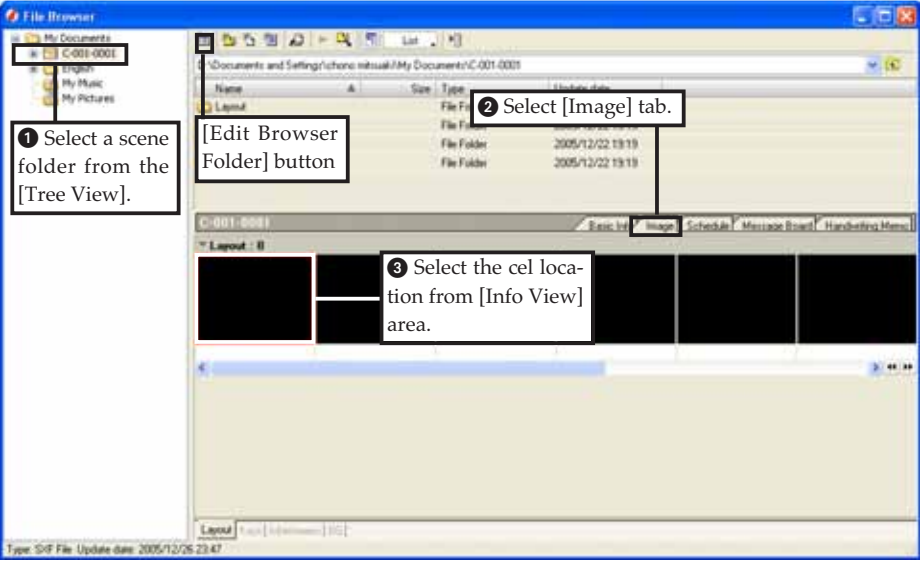
6 Perform the settings then click [OK] to create the scene folder.

Opening the file browser

The procedure for opening the file browsing tool (file browser) is as follows.

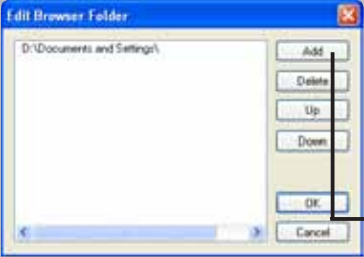
1. Open the file browser.

Select [File Browser] from the [Window] menu to open the file browser.



The File Browser window is shown with a Tree View on the left and a main pane on the right. Annotations indicate: 1. Select a scene folder from the [Tree View]. 2. Select [Image] tab. 3. Select the cel location from [Info View] area. The [Edit Browser Folder] button is also highlighted.

Tips



The Edit Browser Folder dialog box is shown with an 'Add' button highlighted.

Click [Add] to add a target folder in the File Browser.

The file browser can show only the tree under the target and configured folder.

Clicking the [Edit Browser Folder] button on the File Browser shows the dialog box at the left.

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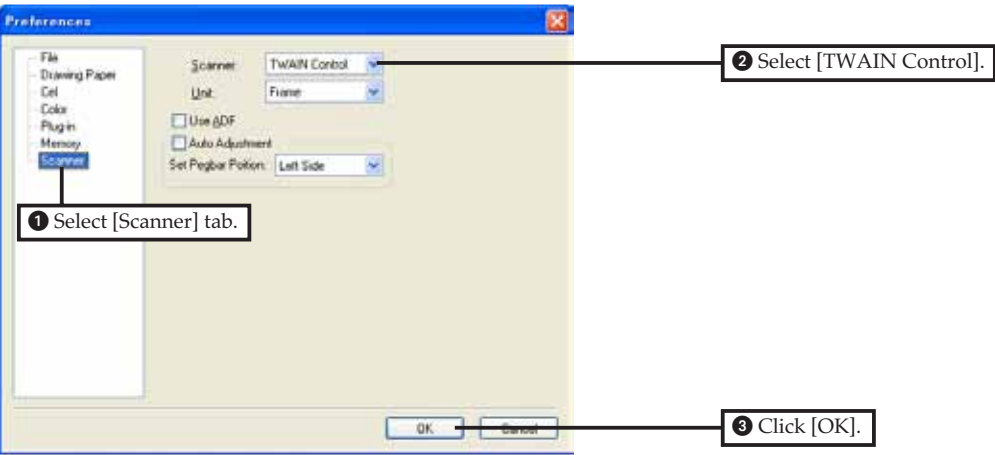
# Scanner setup

## Configuring the scanner settings

The procedure for configuring the connected scanner is as follows.

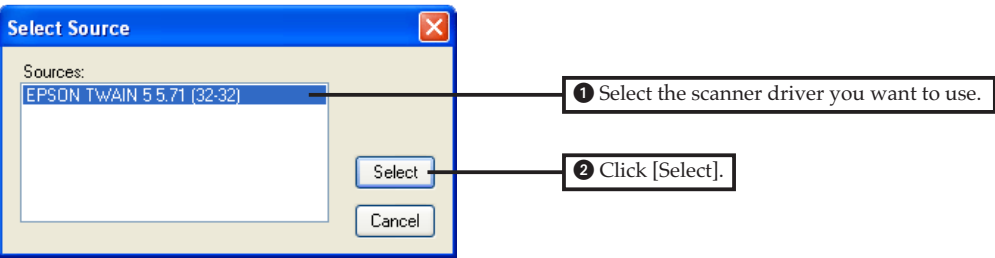
### 1. Open the Preferences dialog box.

Select [Settings] → [Preferences...] from the [Edit] menu. The [Preferences] dialog box appears.



### 2. Select the scanner driver.

Select [Select TWAIN\_32 Compatible Device...] (Windows) or [Select TWAIN Device] (Macintosh) from the [Scan] menu to open the [Select Source] dialog box.

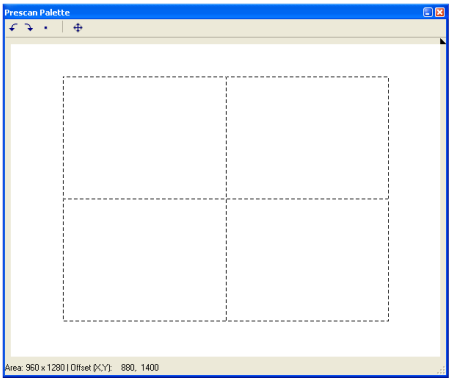
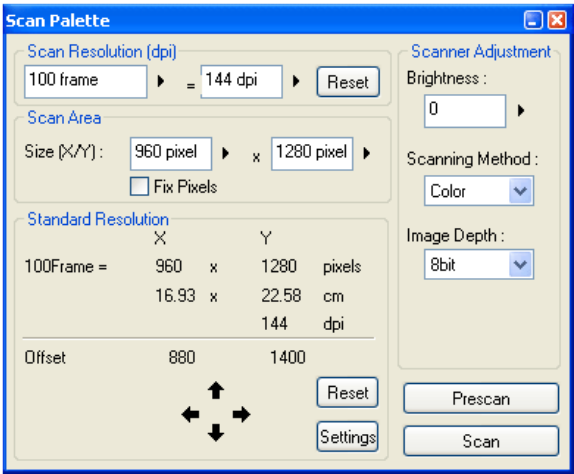


### Tips

- Scanner setup is not necessary at subsequent startups as settings are saved.

### 3. Open the scan palettes.

Select [Scan Palette] and [Prescan Palette] from the [Window] menu to open the [Scan Palette] and the [Prescan Palette], respectively.



### Tips

If the scanner is not connected correctly, a warning dialog box appears instead of the palette. If so, quit TraceMan HD and check whether the scanner is powered on and/or connected correctly.

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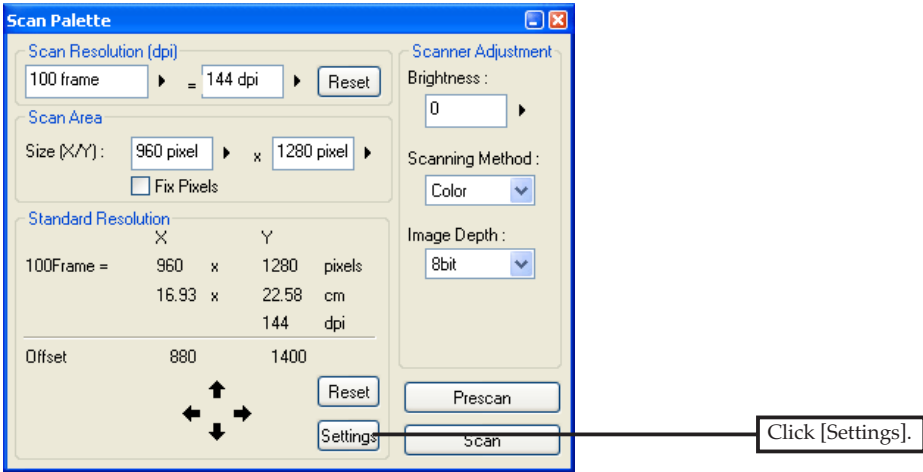


Configuring the 100Frame setting

The procedure for configuring the standard resolution for 100Frame on the [Scan Palette] is as follows.

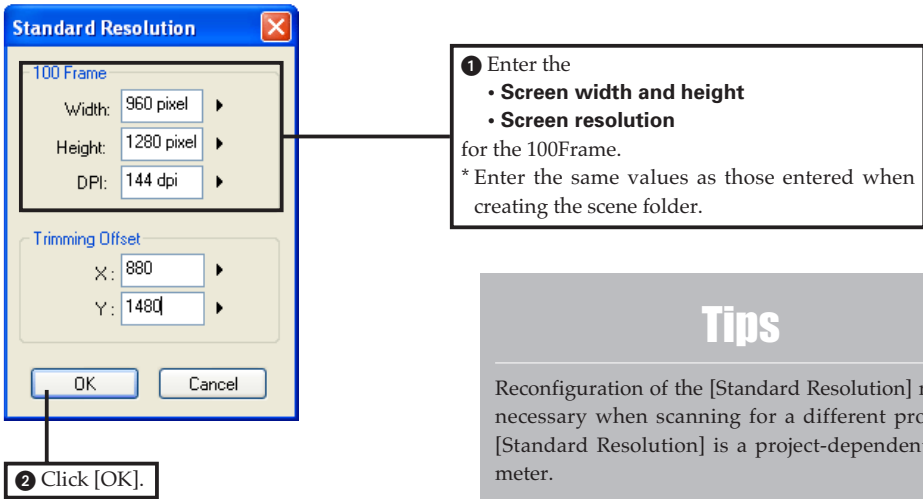
1. Open the Scan palette.

Open the [Scan Palette].



2. Open the Standard Resolution dialog box.

The [Standard Resolution] dialog box appears.

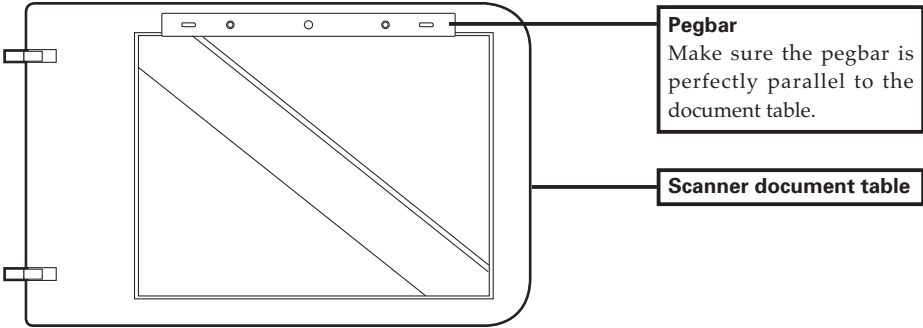


Tips

Reconfiguration of the [Standard Resolution] may be necessary when scanning for a different project as [Standard Resolution] is a project-dependent parameter.

Mounting the pegbar

Fix the pegbar by the side of the scanner document table with adhesive tape.



Tips

Locate the best place to fix the pegbar in your scanner so that its cover can close comfortably.

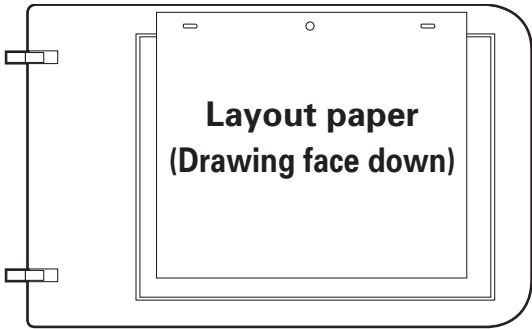
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Configuring the scan area (prescan)

The procedure for loading the layout paper with the drawing frame printed on it, and configuring the scan area is as follows.

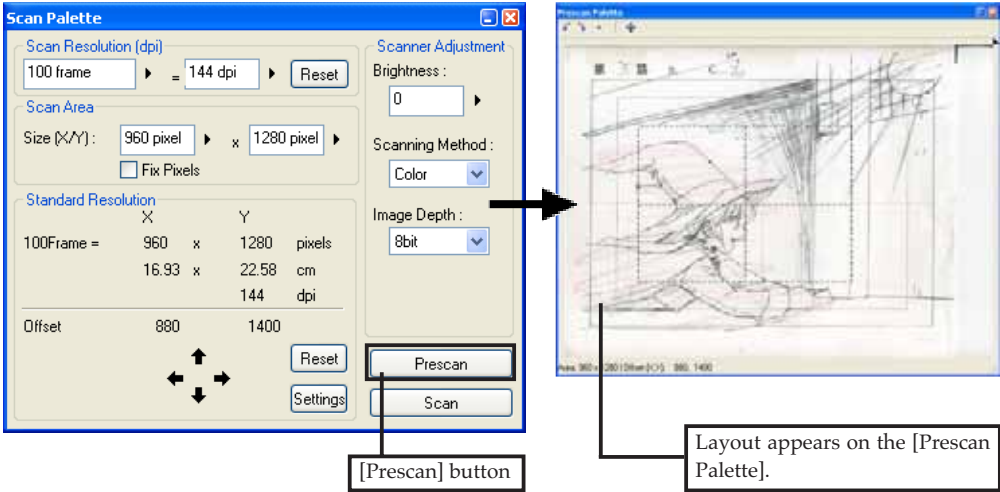
1. Prescan the layout.

Set the layout paper in the scanner using the peg holes.



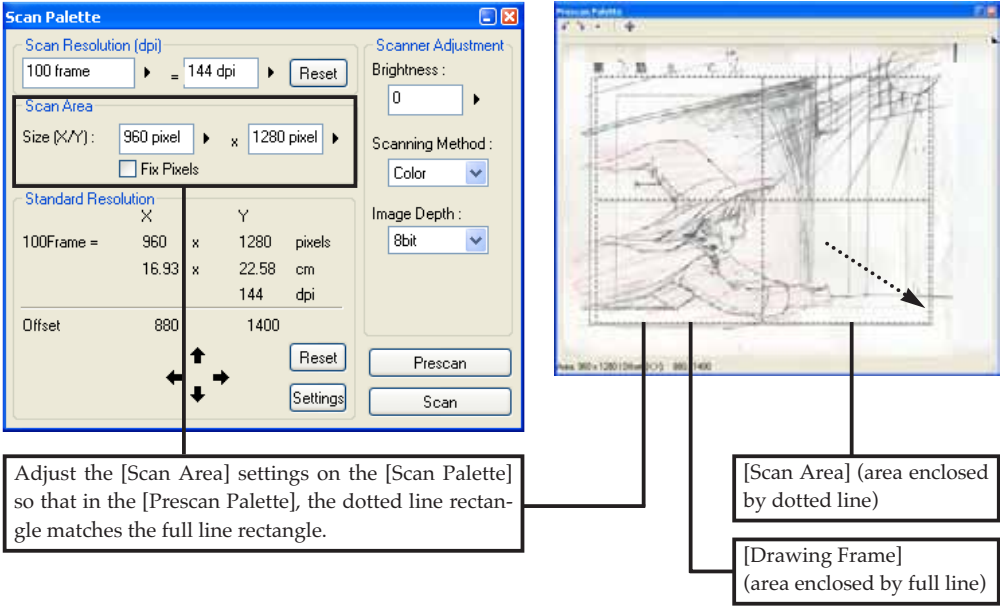
2. Prescan.

Click the [Prescan] button on the [Scan Palette] to prescan.



3. Configure the scan area settings.

Configure the scan area settings using the [Scan Palette].



Tips

- The description above is for positioning a 100Frame or fixed size scene.
- Adjust the scan area as necessary when you need to scan an inbetween on a large cel, for example.

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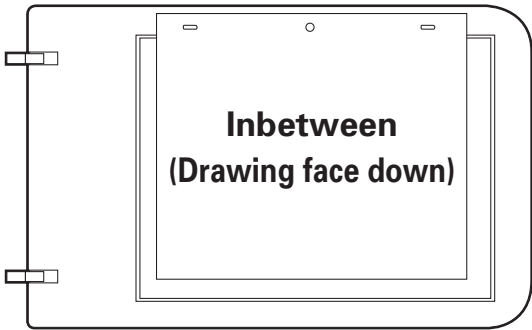
# Scan

## Scanning

The procedure for scanning the inbetweens once you have configured the scan area settings is as follows.

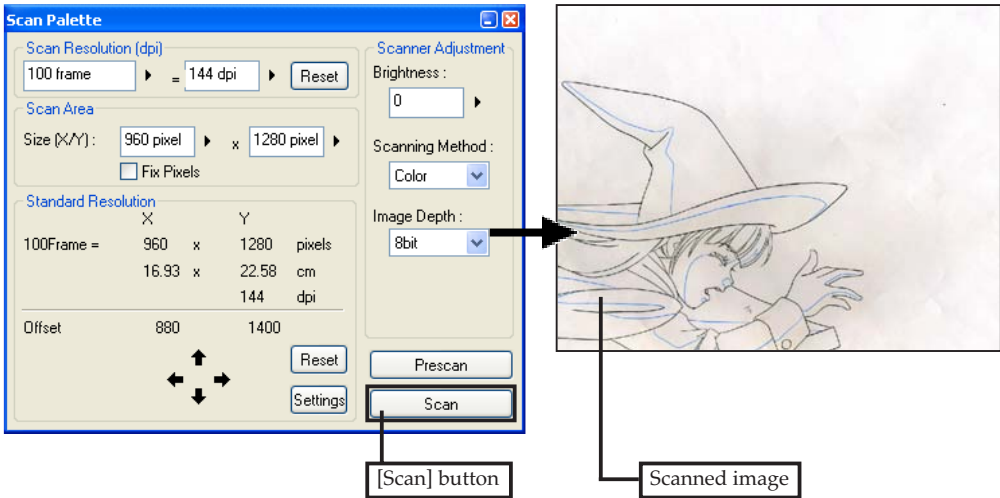
### 1. Set the inbetween.

Set the inbetween in the scanner and select [Scan] from the [Scan] menu.



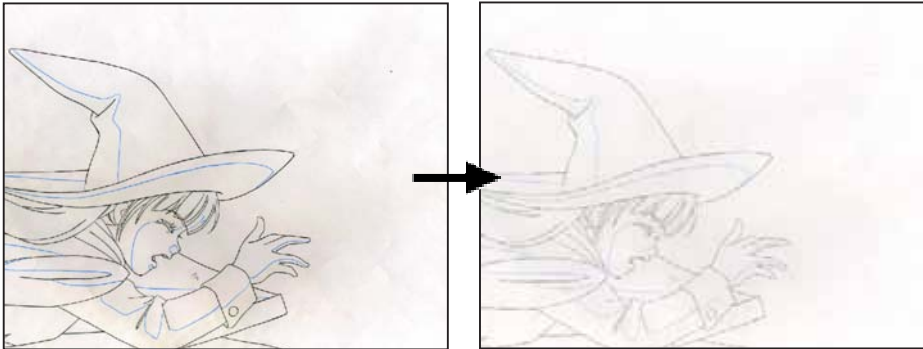
### 2. Scan.

Click the [Scan] button on the [Scan Palette] to scan.



## Compensating

Select [Auto Contrast] from the [Filter] menu to adjust the contrast automatically and make the image quality suitable for tracing.



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# Trace

## Types of trace

Traced data may be classified in the following types depending on the type of painting data generated. Painting data has a layered structure composed of multiple planes.

### 1. Mono trace (mono paint layer)

A trace that generates a mono outline plane and a painting plane. Data volume is relatively small.



Outline plane (mono)



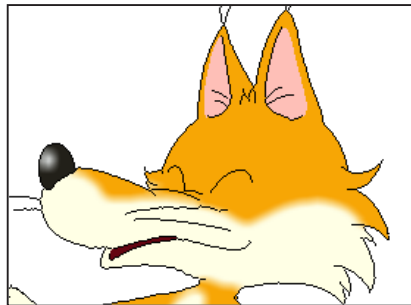
Painting plane

### 2. Gray trace (gray paint layer)

A trace that generates a gray outline plane and a painting plane. The outline can be expressed using a grayscale. Data volume becomes relatively big.



Outline plane (grayscale)



Painting plane (border line, painting)



(Composite image)

### Tips

Painting areas are defined using "border lines" on the grayscale painting plane because the grayscale outline plane cannot have functions for color outlines implemented on it.

### 3. Vector trace (vector paint layer)

A trace that generates a vector outline plane and a vector painting plane. Quality of the lines is not compromised even if the image is enlarged. Data volume is relatively small.



Outline plane (vector)



Color separation line plane (vector)



Coloring plane (vector)

### Tips

The [Painting Plane] for vectors is composed of a [Color Separation Line Plane] for color separation lines and a [Coloring Plane] for surface painting.

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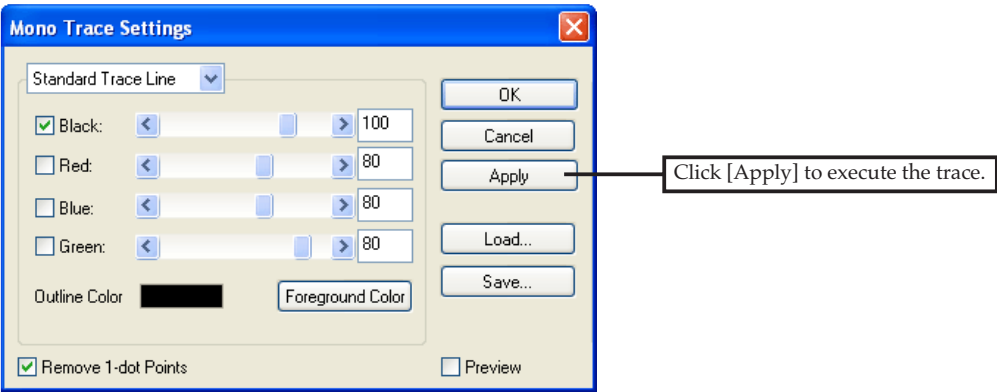
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Executing a mono trace

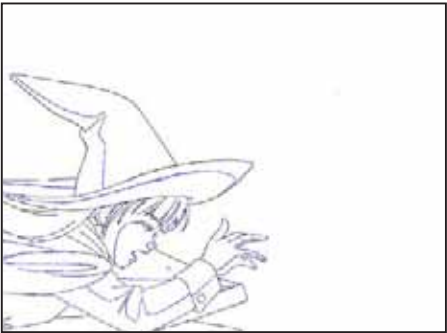
1. Open the Mono Trace Settings dialog box.

Select [Mono Trace Settings...] from the [Trace] menu to open the [Mono Trace Settings] dialog box. There, configure the mono trace settings.



2. Completion

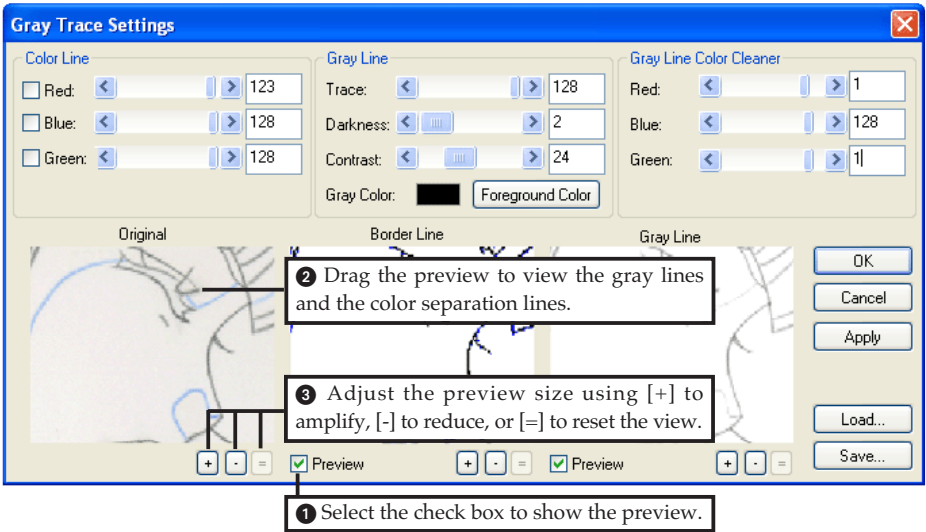
The image is mono traced.



Executing a gray trace

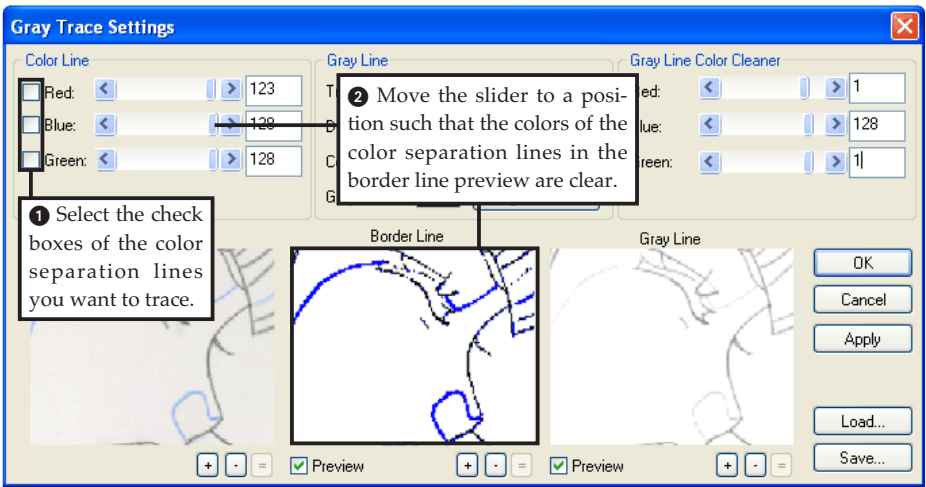
1. Adjust the preview.

Firstly, adjust the preview. Select [Gray Trace Settings...] from the [Trace] menu and open the [Gray Trace Settings] dialog box.



2. Configure the border lines (color separation lines) settings.

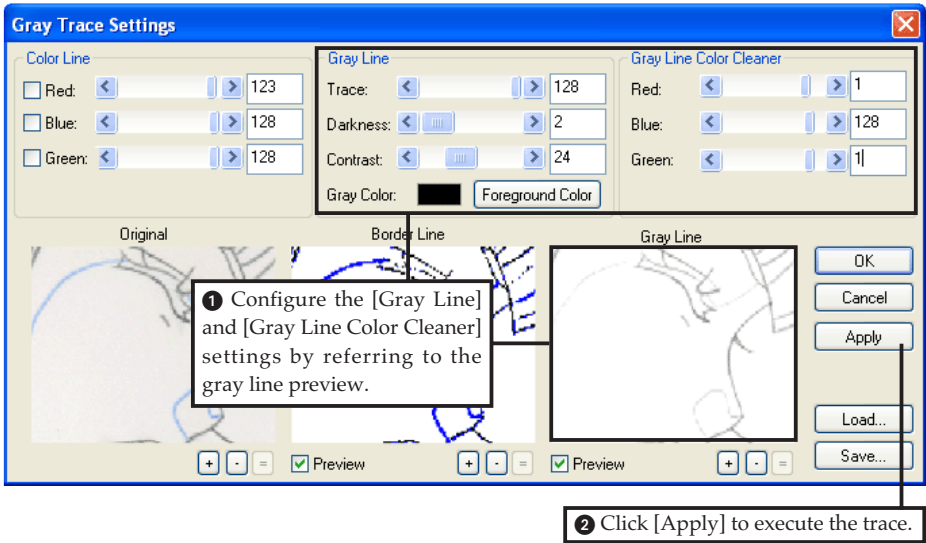
Configure the color separation lines you want to include in the border lines.



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3. Configure the outline settings.

Configure the outlines you want to include in the border lines.



4. Completion

The image is gray traced.



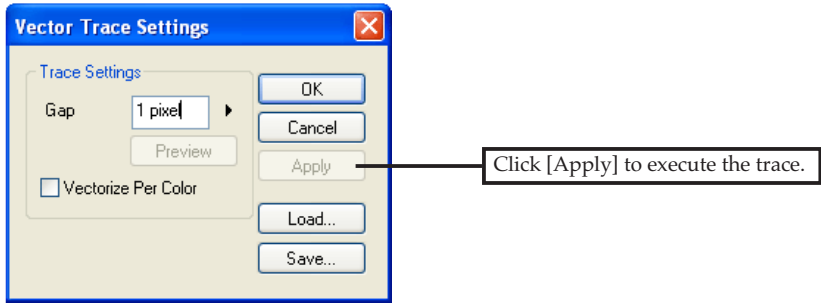
Executing a vector trace

1. Execute a mono trace.

Firstly, execute a mono trace.  
Vector trace can be executed only on a mono trace data.

2. Open the Vector Trace Setup dialog box.

Secondly, select [Vector Trace Settings...] from the [Trace] menu and open the [Vector Trace Settings] dialog box. There, configure the vector trace settings.



3. Completion

The image is vector traced.



Tips

Vector trace can be executed only on a mono trace data.

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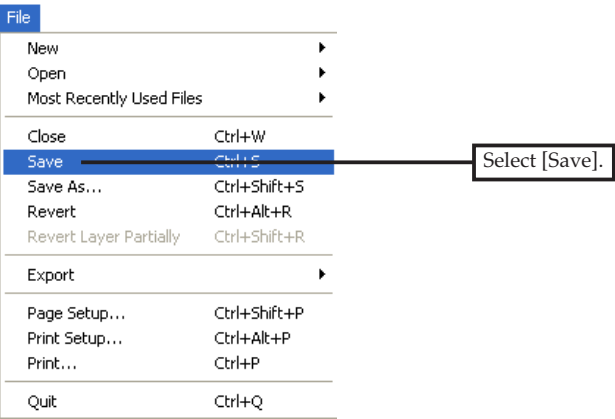
# Save

## Saving

The procedure to save the traced image is as follows.

### 1. Select the save command.

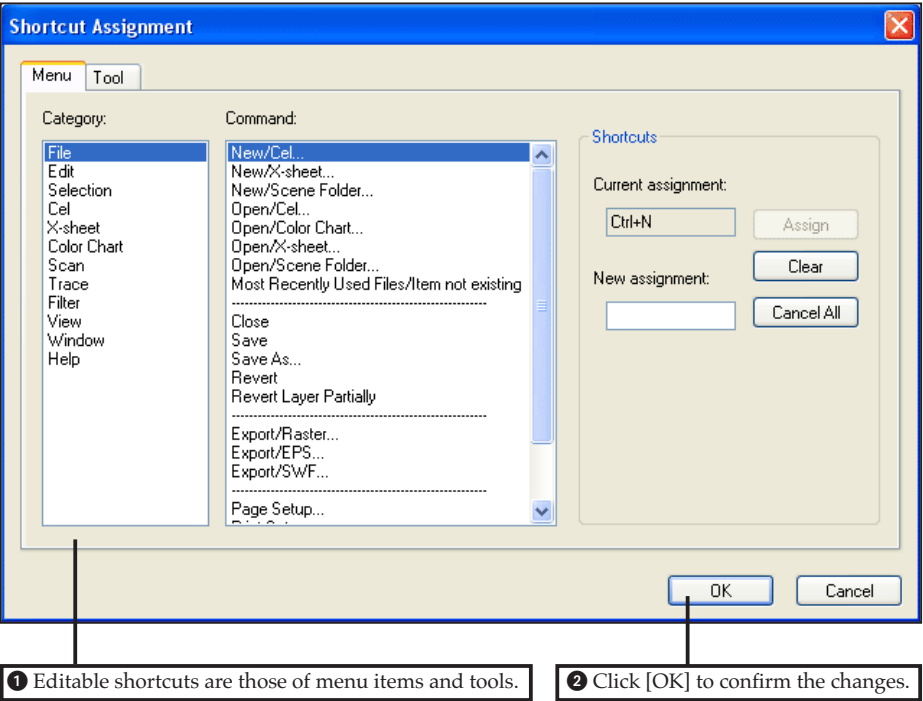
Select [Save] from the [File] menu. The file is saved in the scene folder you created at the beginning.



# Editing the shortcuts

## Configuring the shortcuts

To edit the shortcuts, select [Settings...] → [Shortcut...] from the [Edit] menu.



# About scanners

## About compatible scanners

The only scanner control method supported by TraceMan HD is [TWAIN Control]. [SCSI] and [Direct SCSI Control] are not supported.  
For details on supported scanners, see the RETAS!PRO website.

| Connection method | TWAIN driver | Operation confirmation | [TWAIN Control] | Note |
|-------------------|--------------|------------------------|-----------------|------|
| USB               | Yes          | OK                     | Yes             | *1   |
| USB               | Yes          | Not done               | Not tested      |      |
| USB               | No           | -                      | No              |      |
| IEEE1394          | Yes          | OK                     | Yes             | *1   |
| IEEE1394          | Yes          | Not done               | Not tested      |      |
| IEEE1394          | No           | -                      | No              |      |

\*1 [TWAIN] may function, but is not guaranteed.

USB or IEEE1394 interface for scanner connection is required on the computer for using a scanner with TraceMan (both Windows and Macintosh).

## About scanner control methods

**Supported scanner control methods are two: [TWAIN] and [TWAIN Control].**

Note: See [Settings...] → [Preferences...] → [Scanner] under the [Edit] menu (Windows), or [Preferences...] → [Scanner] under the application menu (Macintosh).

### What is [TWAIN]?

[TWAIN] is a standard to control input/output devices such as scanners. [TWAIN] consists of a [TWAIN Driver] supplied by the scanner manufacturer and a TWAIN Compatible Application Software. If the application supports TWAIN, scanners can be used regardless of the model, in principle.

However, due to compatibility between the [TWAIN Driver] and the application software, or due to changes in the [TWAIN Driver] specification, there is no guarantee the scanner can be actually used even if it is a [TWAIN] compatible scanner. So, before purchasing a scanner, make sure to check whether it is an operation-confirmed model or not for TraceMan HD. For information on operation-confirmed scanners, see the RETAS!PRO website.

### Handling of [TWAIN] in RETAS!PRO

[TWAIN] can be used for any scanner supporting TWAIN regardless of the model, but if [TWAIN...] command is executed, TraceMan HD leaves all the scanner controls to the [TWAIN Driver] after calling it.

Therefore, the scanner control using [TWAIN] is not done by TraceMan HD but by [TWAIN Driver].  
As a result, TraceMan HD proprietary user interfaces such [Prescan Palette] and [Scan Palette] become unavailable as the user interface during the scan using [TWAIN] is the one provided by the [TWAIN Driver].

**Note:** Some functions such as ADF support and automatic sorting of auto-scanned images cannot be used when [TWAIN] is used for scanner control.

### Handling of [TWAIN Control] in RETAS!PRO

With [TWAIN Control], it is TraceMan HD who operates the scanner by sending the necessary commands to the scanner via [TWAIN Driver]. Therefore, with [TWAIN Control], the one that does scanner control is TraceMan HD itself and TWAIN Driver is just a mediator. In other words, the [Prescan Palette] and [Scan Palette] are available when scanning with a TWAIN compatible scanner using [TWAIN Control].

**Note:** Some functions such as ADF support and automatic sorting of auto-scanned images cannot be used when [TWAIN] or [TWAIN Control] is used for scanner control.

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The logo for RETAS!PRO, featuring the text "RETAS!PRO" in a bold, sans-serif font. The exclamation mark is stylized with a dot that has a small tail. The logo is positioned at the bottom left of a light gray rectangular area in the top right corner of the page.

RETAS!PRO

# Chapter **4**

## Basics of RETAS!PRO

# Scene Folder

## What is a scene folder?

The production of an animation is a group work that involves the handling of a large amount of image files. If everyone in the group is allowed to name files and folders arbitrarily on his/her own, division of works would become impossible as nobody would know where a particular image is stored or what the content of an image file is, except the person that created the file.

In RETAS!PRO, image files are managed on a folder basis as a method for managing large amount of image files efficient and systematically. And this management method is called "Scene Folder system". Furthermore, implementing an image file management compliant with the "Scene Folder system" makes it easier to exchange data with other animation studios. In the scene folder system, all data necessary for a scene is saved in a folder called "Scene Folder".

RETAS!PRO HD allows you to digitize directions and/or messages that were traditionally conveyed in paper. That is, you cannot only enter basic information regarding the scene such as "Title", "Sequence Number", and "Scene Number" etc. but use a function called "Message Board" to include directions and messages in text format in the scene, or use the "Handwriting Memo" function to include directions that are difficult to convey in plain text. In this way, with RETAS!PRO HD, you only need to pass on the scene folder without the need to prepare a separate set of papers containing directions and messages, allowing you to implement a completely paperless workflow.

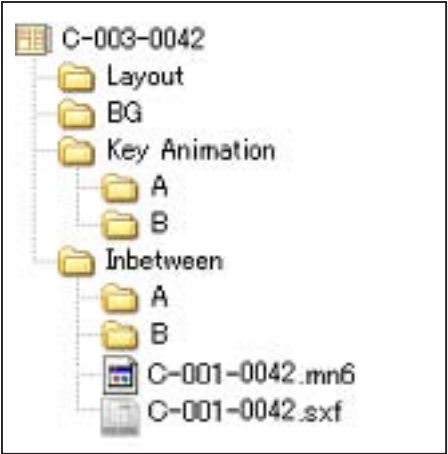
## Two types of scene folders

Scene folders are either "Drawing Scene Folder" or "Cel Scene Folder" depending on where they are used.

### Drawing Scene Folder

A scene folder for drawing with STYLOS HD

- composed of
- "Layout"
  - "Key Animation"
  - "Inbetween"
  - "BG"
  - "X-sheet" (sxf)
  - Management file (mn6)



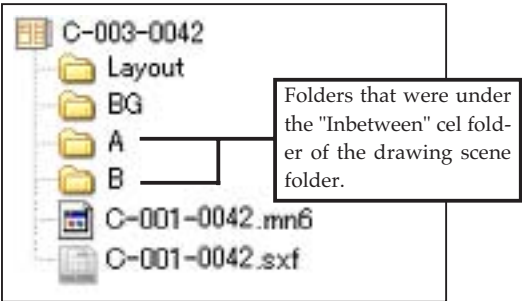
Drawing Scene Folder

### Cel Scene Folder

A scene folder for

- **Scanning and tracing with TraceMan HD**
- **Painting with PaintMan HD**
- **Shooting with CoreRETAS**

- composed of
- "Layout"\*
  - "Key Animation"\*
  - "Inbetween"
  - "BG"\*
  - "X-sheet" (sxf)
  - Management file (mn6)
- \* Selectable at export.



Cel Scene Folder

## Tips

When [Export] → [Painting...] is selected from the [File] menu, the STYLOS HD "Drawing Scene Folder" with finished drawings is converted into "Cel Scene Folder" with the cel folders under the "Inbetween" folder extracted. Note that folders with names starting with "-" (hyphen) or "\_" (underscore) such as "-BG" or "-LO" cannot be batch processed by TraceMan HD.

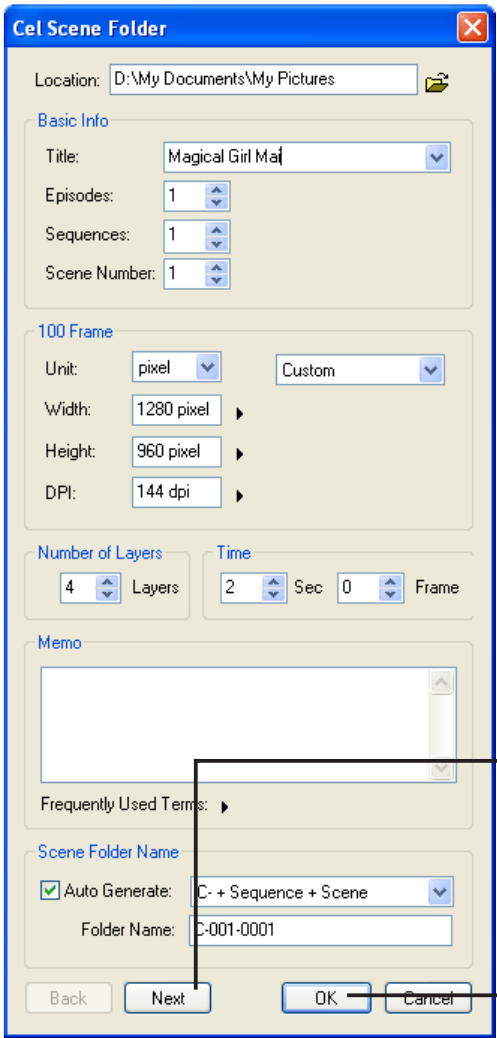
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Creating a new drawing/cel scene folder

The procedure for creating a drawing scene folder (for STYLOS HD) or a cel scene folder (for TraceMan HD or PaintMan HD) is as follows.

1. Open the [Scene Folder Basic Settings] dialog box.

Select [New Scene Folder...] from the [File] menu or the [File Browser] to open the [Drawing Scene Folder] or [Cel Scene Folder] dialog box Basic Settings menu.



After configuring the settings, click [Next] to open the [Scene Folder-Layer Settings] dialog box. (Only TraceMan HD and PaintMan HD)

Configure the settings then click [OK] to create the scene folder.

[Location]

Click the button at the right to open the [Browse Folder] dialog box and select the folder location.

[Basic Info]

- [Title]  
Enter the title.
- [Episodes]  
Enter the number of episodes.
- [Sequence]  
Enter the sequence number.
- [Scene Number]  
Enter the scene number.

[100Frame]

- **Popup menu**  
The popup menu allows you to select the unit, width, and height for the 100Frame from a list.
- [Unit]  
Enter the unit for the 100Frame standard resolution.
- [Width]  
Enter the width for the 100Frame standard resolution.
- [Height]  
Enter the height for the 100Frame standard resolution.
- [DPI]  
Enter the resolution for the 100Frame standard resolution.

[Number of Layers]

Enter the number of layers (cel folders) that will be available in the scene folder.

[Time]

Enter the length of the scene.

[Memo]

Enter memos as required.

[Scene Folder Name]

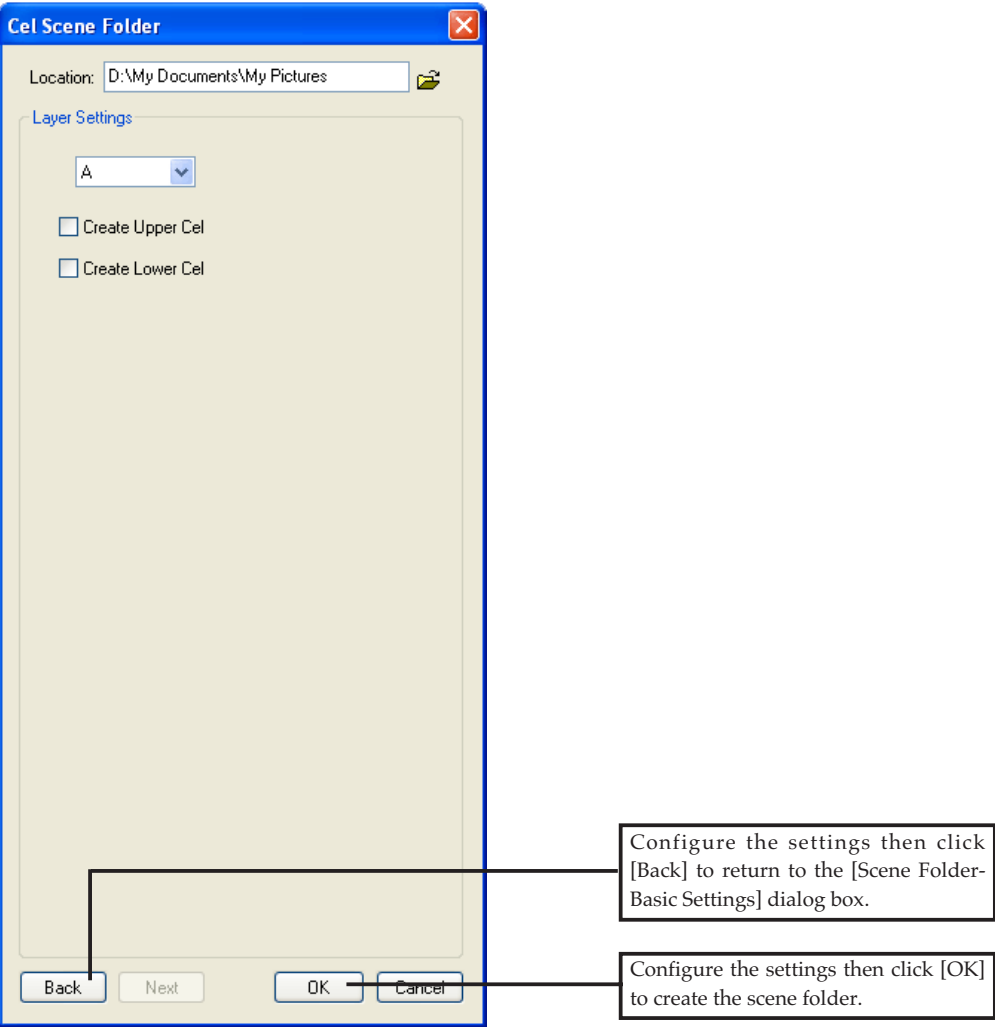
- **[Auto Generate]**  
This option allows you to automatically generate the scene folder name using the sequence number, scene number, etc.  
[C- + Sequence + Scene]  
[Sequence + Scene]  
[Episode + Sequence + Scene]  
[Title + Episode + Sequence + Scene]
- **[Folder Name]**  
This field is for entering the scene folder name manually (when not using the automatic generation option).
- [OK]  
Creates a new scene folder according to the settings in the dialog box.
- [Cancel]  
Cancels the new scene folder creation.
- **[Next] (Only TraceMan HD and PaintMan HD)**  
This button allows you to open the next setting dialog box. Switches the shown dialog box from [Scene Folder Settings] to [Scene Folder-Layer Settings]. Use this button to configure the [Upper Cel] and [Lower Cel] settings.

Configuring the upper cel/lower cel (Only TraceMan HD/PaintMan HD)

Upper Cel or Lower Cel is a layer on top of or under a given layer. If you create an Upper Cel or a Lower Cel for a given A Cel, the Upper or Lower Cel will share with A Cel all of the parameters on the X-sheet except [Cel Number].

1. Open the [Scene Folder Layer Settings] dialog box.

The [Scene Folder-Layer Settings] dialog box is shown when [Next] is clicked in the [Scene Folder-Basic Settings] dialog box of the TraceMan HD or PaintMan HD.



**[Location]**  
Click the button at the right to open the [Browse Folder] dialog box and select the folder location.

**Layer Settings menu**  
This menu is for selecting the Cel Layer to which you want to create an Upper Cel or a Lower Cel.

- **[Create Upper Cel]**  
Creates an [Upper Cel] subfolder for the selected layer.
- **[Create Lower Cel]**  
Creates a [Lower Cel] subfolder for the selected layer.

- **[Back] button**  
Returns to the previous settings dialog box.
- **[Next] button**  
Advances to the next settings dialog box.

- **[OK] button**  
Creates a new scene folder according to the settings in the dialog box.
- **[Cancel] button**  
Cancels the new scene folder creation.

Tips

Selecting [New Scene Folder...] from the [File] menu in STYLOS HD shows the [Drawing Scene Folder] dialog box that creates a [Drawing Scene Folder]. However, selecting [New Scene Folder...] from the [File] menu in TraceMan HD or PaintMan HD shows the [Cel Scene Folder] dialog box that creates a [Cel Scene Folder].

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Scene Folder components

A scene folder may contain the following components.

1. Cel folder: A folder for storing inbetweens

Images such as BG (background), A cels, B cels, and C cels are stored in their respective folders. In principle, the folder name must match that of the layer. That is, images for A cels must be stored in folder "A", those for B cels in folder "B" and so on. If CoreRETAS finds a subfolder with the same name as the folder of the corresponding image layer (e.g., -BG, A - Z) when loading a "Scene Folder", it considers the subfolder a "cel folder". CoreRETAS loads the "cel folder" to the cel bank and links it to a cel layer of the same name. Folder names for BG (background) generally start with "-" (hyphen)" or "\_" (underscore)". Examples: "-BG"

2. Subcel folder: A folder for storing combined cels

A subcel layer is an image layer under the cel layer and it is either an Upper Cel type or a Lower Cel type. This is mainly used for "combined cels". When processing a "combined cel" use the "Lower Cel" if there is no special reasons. At "Scene Folder" loading, CoreRETAS automatically searches the cel folders under the scene folder and executes the "Load to Cel Bank" and "Transparency Settings". If CoreRETAS finds subfolders under the "Cel Folder", it loads them to the cel bank according to the following procedure.

If a subfolder with the same name as the cel folder (-BG, A - Z) is found under a cel folder, the folder is loaded to the cel bank and linked to a cel layer of the same name.

If a folder with the name "(image layer) folder name" + "+" or "(image layer) folder name" + "-" is found under a cel folder, the folder is loaded to the cel bank as "Upper Cel" or "Lower Cel" of the "image layer", respectively.

Any other image file or folder cannot be loaded automatically by CoreRETAS.

3. Image file: An image file containing a key, inbetween, or BG drawing

A cel folder contains images to be used in the relevant layer. In the scene file system, the basic naming rule is as follows.

Layer Name + (4-digit) Sequential Number + Extension

The "layer name" is, in principle, a 1-letter name that corresponds to A Cel, B Cel, etc.

The "sequential number" must always be a 4-digit number. The sequential number starts at "0000". However, "0000" is not used.

The "extension" must be placed unless there is a special reason. (Also when working with MacOS)

Example: A Cel image layer folder

A0001.png  
A0002.png  
A0003.png  
A0004.png  
.  
.

Examples of invalid names:

|           |                                                                                  |
|-----------|----------------------------------------------------------------------------------|
| A0000.png | The sequential number part is "0". Sequential number must always start from "1". |
| A1.png    | Number of digits in "sequential number" is insufficient.                         |
| A0002     | Extension is missing.                                                            |

It is not necessary for you to follow the naming rules, except for the "extension" for the system to be able to process your files. However, be careful as RETAS!PRO numbers the inbetweens in ascending order (the order in which they are registered into the library).

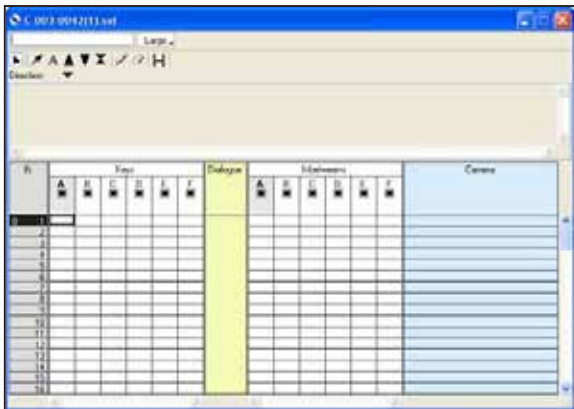
Tips

Note that folders with name starting with "-" (hyphen)" or "\_" (underscore)" or including "BG" in their name cannot be batch processed with RETAS!PRO.

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4. X-sheet file:  
STYLOS (extension: sxf) / CoreRETAS (extension: tsf)

The following is an example of an X-sheet file created with RETAS!PRO.



This file is used to specify the timings for the animation. There are two types of X-sheet: the STYLOS and the CoreRETAS.



[X-sheet file]  
(STYLOS)



[X-sheet file]  
(CoreRETAS)

5. Management file (extension: mn6)

This is a file where you will record various data which are necessary for working with each of the RETAS!PRO applications.

RETAS!PRO considers a folder Scene Folder and automates its processing and configuration only if a management file is present in the folder.

The management file is a file created by RETAS!PRO when it creates a "new scene folder". This is not a file the user can create at his/her discretion.

All RETAS!PRO applications executes the various settings automatically based on the information there.

Furthermore, each RETAS!PRO application rewrites the information as required.

For these reasons it is prohibited for users to move, delete, or change directly the "management file".

Data of an already created X-sheet for example, does not become corrupted even if the user moves, deletes, or changes the "management file" directly. However, settings that are usually configured automatically may need to be done manually.



[Management File]

Rules for scene folder operation

The followings are basic rules you need to follow in the operation of scene folders.

1. To move, copy, or delete a file, perform the operation on a folder basis.

RETAS!PRO handles images on a folder basis. Moving only a particular image file after having loaded the scene folder may cause unexpected troubles due to inconsistency with the X-sheet content, for example. Also make sure to create a dedicated folder even when you need to deal with only one file.

2. Do not store unnecessary files in the folder.

Save intermediate files generated in the processes to a dedicated folder under the scene folder because if unnecessary files are present in the folder for inbetweens, they will produce blank positions when the inbetweens are loaded to the file previewer / cel bank (see "Inbetween numbering in RETAS!PRO" below).

3. Folders you want to exclude from batch processing.

To exclude folders such as those for BGs and/or intermediate materials from the subfolder batch processing by TraceMan, use folder names starting with "-" (hyphen)" or "\_" (underscore)". Examples: "-BG", "\_temp"

Scene Folder name basic format

The followings are basic formats of recommended Scene Folder names.

Example: Scene number 12  
C-012

If the scene contains a number of sequences:

Example: Sequence 07 of scene number 20  
C-07-20

If a scene folder contains a number of shared scenes, name the folder putting all scene numbers separated by a comma.

Example: Shared scenes 17, 19, and 22  
C-017,019,022

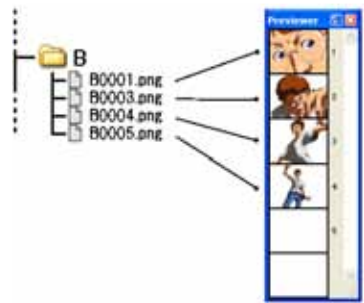
Image files containing scanned frame markups for camera work for example, must be saved in a folder named -FRAME (or FRAME).

Example: -FRAME

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Inbetween numbering in RETAS!PRO

In RETAS!PRO, the inbetween number (cel order) is not directly related to the sequence number in the file name. RETAS!PRO loads to the cel bank (CoreRETAS) all image files present in a specified folder as a series of inbetweens (sequentially numbered files) and numbers them in the order they are loaded (in ascending order). Files are loaded sorted by name starting with "1". For this reason, the number in the filename and the cel number in the file previewer/cel bank are not always the same, depending on how the files are named.



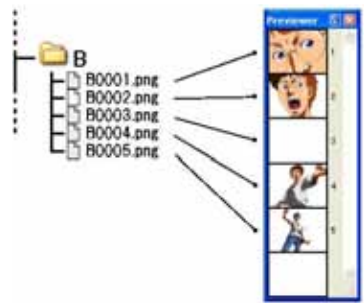
[Figure: When there is a missing number]

In the example above, there is a difference between the actual cel number and the cel number in the file previewer or cel bank since A0002.png is missing.

Manage the files as described in the following sections to avoid differences in the cel numbers and make working with RETAS!PRO smoother.

Missing (deleted) inbetween

If there is a deleted image file inbetween, a difference arises between the actual cel numbers and the cel numbers in the file previewer/cel bank for subsequent cels. To avoid this kind of situation, insert a dummy file.



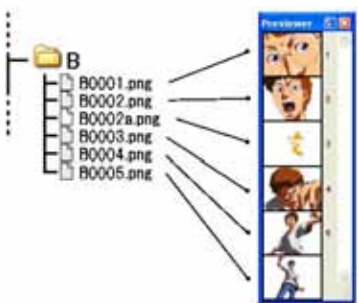
[Figure: Example with a dummy file (A0002.tga is the dummy file)]

Paint the dummy file in pure white (R:255 G:255 B:255) so that it is handled as transparent even if included in the CoreRETAS X-sheet by mistake.

Additional inbetween

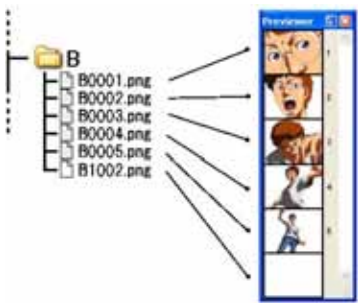
Assume a case of an additional inbetween between the second (A0002.png) and the third (A0003.png) inbetweens.

The inbetween can be added in the correct position by naming it "A0002a.png", for example. However, if named in this way, the subsequent cel numbers will differ from the actual ones when loaded to CoreRETAS.



[Figure: Example with additional file (A0002a.png)]

Use a cel number larger than that of the last inbetween for the additional inbetween to avoid the difference in numbers in the file previewer/cel bank. Put a far larger cel number for the additional inbetween. Use "A1002a.png", for example, to easily identify that it is an additional inbetween from the filename.



[Figure: Example with additional file (A1002a.png)]

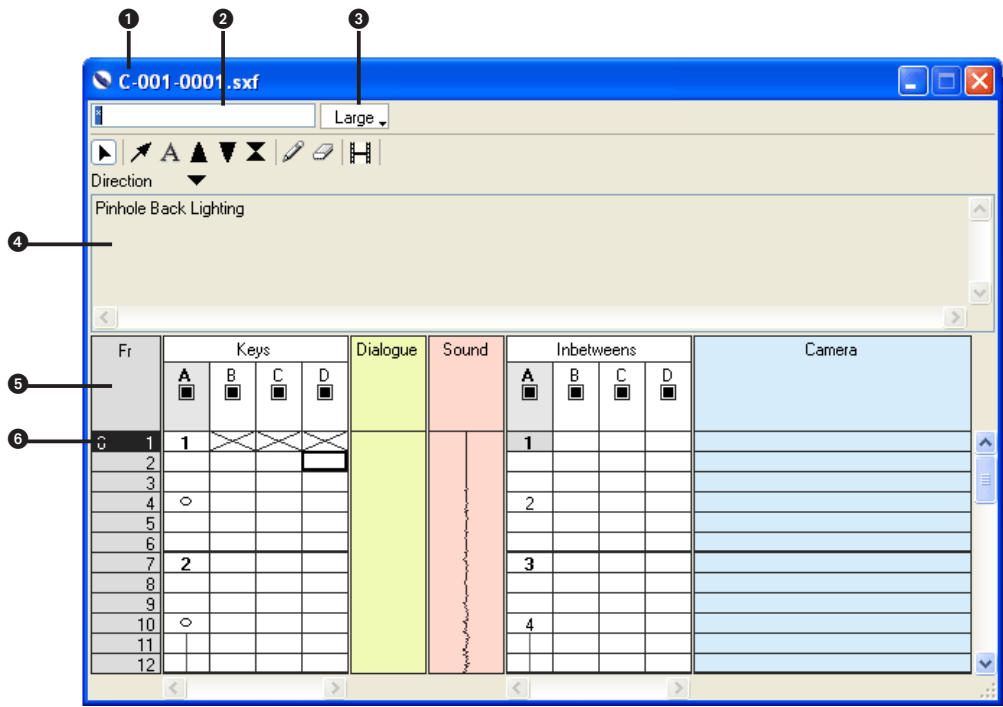
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# X-Sheet

## What is an X-sheet?

The X-sheet is the form where the timings for keys and inbetweens, the cel stacking, shooting directions, etc. are specified. The horizontal axis indicates how the cels must be arranged in the cel stack (layers) while the vertical axis, the times (frame). In RETAS!PRO, the X-sheet is used to manage key numbers, inbetween numbers, dialogue, sound, shooting directions, etc.



### Frame (row)

"Frame" is the name given to each of the X-sheet rows. Frames always start from "1", so that the in the 12th row you have the "12th frame" and in the 60th row, the "60th frame". A maximum of 999 rows are available for frames.

### Layer (column)

"Layer" is the name given to each of the X-sheet columns which represents an image layer. Both for [Keys] and [Inbetweens], the more at the left a layer is the more at the bottom in the cel stack and vice versa. A maximum of 32 layers of cels are available for both keys and inbetweens, shown as A - Z, AA - AF by default.

### Data cell

"Data Cell" is the cell in which a key number or inbetween number is registered.

## Name of the X-sheet window components

- 1 **Title bar**  
Shows the X-sheet filename.
- 2 **Input box**  
Field for entering data such as key number, inbetween number, dialogue, etc.
- 3 **View Size switch**  
Select a view size for the [X-sheet] window from among Large, Normal, and Small.
- 4 **Direction field**  
Field for entering the text of a shooting direction, for example. To enter a text, double click any part of the field.
- 5 **Current frame**  
"Current Frame" is the frame you are currently working on and is shown highlighted.

## Tips

The X-sheet explained in this chapter is primarily the X-sheet used in STYLOS HD (\*.sxf). For you to be able to use an X-sheet in SXF format in CoreRETAS, you need to export it to a CoreRETAS X-sheet (\*.tsf) using either STYLOS HD, TraceMan HD, or PaintMan HD.



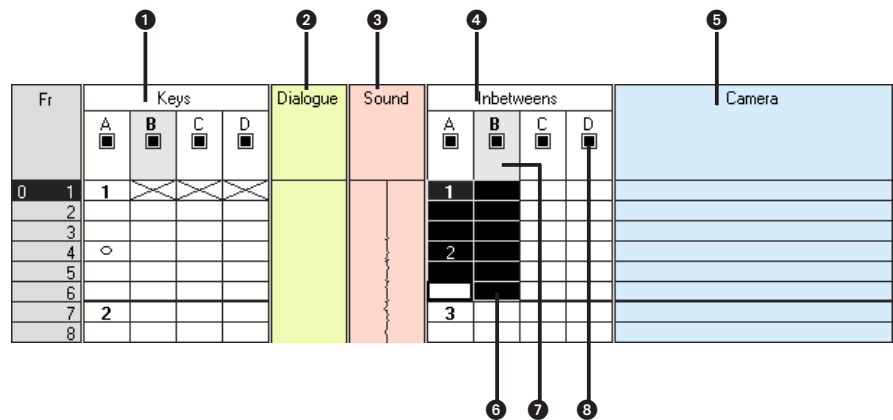
SXF format



TSF format

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Name of the X-sheet window fields



1 [Keys] column

This column is for registering keys. It comprises multiple layers such as "A Cel", "B Cel", etc. The more at the left a layer is the more at the bottom in the cel stack and vice versa. That is, cels are ordered in the cel stack in the A Cel, B Cel, C Cel, etc. order from the bottom.

2 [Dialogue] column

This column is for entering the dialogue.  
The dialogue is entered from the Input field and shown in this column at a pace of 1 letter each 3 frames.

3 [Sound] column

This column is for registering the sound. The column is not shown by default.  
The sound is shown on this layer as a sound wave.

4 [Inbetweens] column

This column is for registering the inbetweens. It comprises multiple layers such as "A Cel", "B Cel", etc. The more at the left a layer is the more at the bottom in the cel stack and vice versa. That is, cels are ordered in the cel stack in the A Cel, B Cel, C Cel, etc. order from the bottom.

5 [Camera] column

This column is for putting shooting directions. You may use tools such as Arrow, Text, Fade In, Fade Out, and Overlap to put shooting directions.

6 Selection

Selection is an area in the X-sheet where multiple data cells are selected and is shown highlighted. You may select multiple rows as well as multiple columns within the "Keys column" or "Inbetweens column".  
The Selection can be used as target of an input from the Input box, a Cut&Paste, or a "Transfer Inbetween Numbers" function when entering inbetween numbers. The Selection can be moved using the arrow keys.

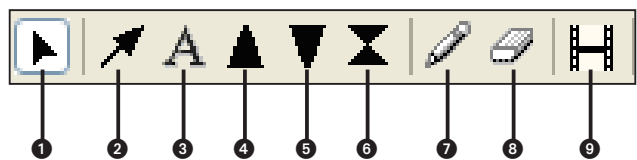
7 Current layer

"Current Layer" is the layer you are currently editing on the X-sheet and is shown highlighted.

8 Cel Layer switch

If clicked and turned off, the corresponding layer is excluded from the drawing targets.

Name of the X-sheet window tools



1 [Column Selection] tool

2 [Arrow] tool

3 [Text] tool

4 [F.I. (Fade In)] tool

5 [F.O. (Fade Out)] tool

6 [O.L. (Overlap)] tool

7 [Pen] tool

8 [Eraser] tool

9 [Motion Check] button

\* For details about the operation of each tool, see the relevant section in this manual.

Creating a new X-sheet

Creation of a new X-sheet requires the entry of the basic settings, project information, and other details.

1. Creating a new X-sheet

Open a scene folder in the [File Browser].  
Click [New X-sheet] on the [File Browser].

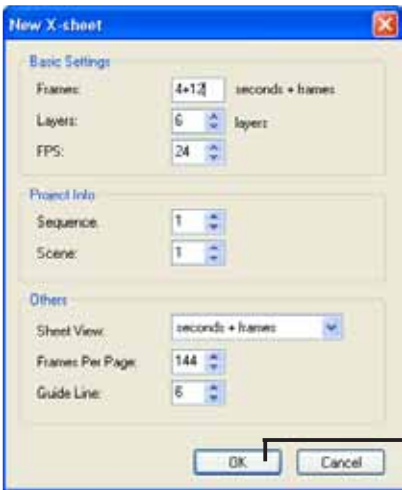


Tips

Creation of a new X-sheet is also possible by selecting [New] → [X-Sheet...] from the [File] menu.

2. Configuring with the New X-sheet dialog box

The [New X-sheet] dialog box is for configuring the basic settings, project information, and other details.



[Basic Settings]

- **[Frames]**  
Specify the duration of the X-sheet expressed in the units selected in [Sheet View].
- **[Layers]**  
Specify the number of cels of keys and inbetweens to be arranged in the cel stack.
- **[FPS]**  
Specify the number of frames per second.

[Project Info]

- **[Sequence]**  
Specify the sequence number of the animation.  
In the sequence number, you may use single-byte characters such as "1A".
- **[Scene]**  
Specify the scene number of the animation.  
In the sequence number, you may use single-byte characters such as "1A".

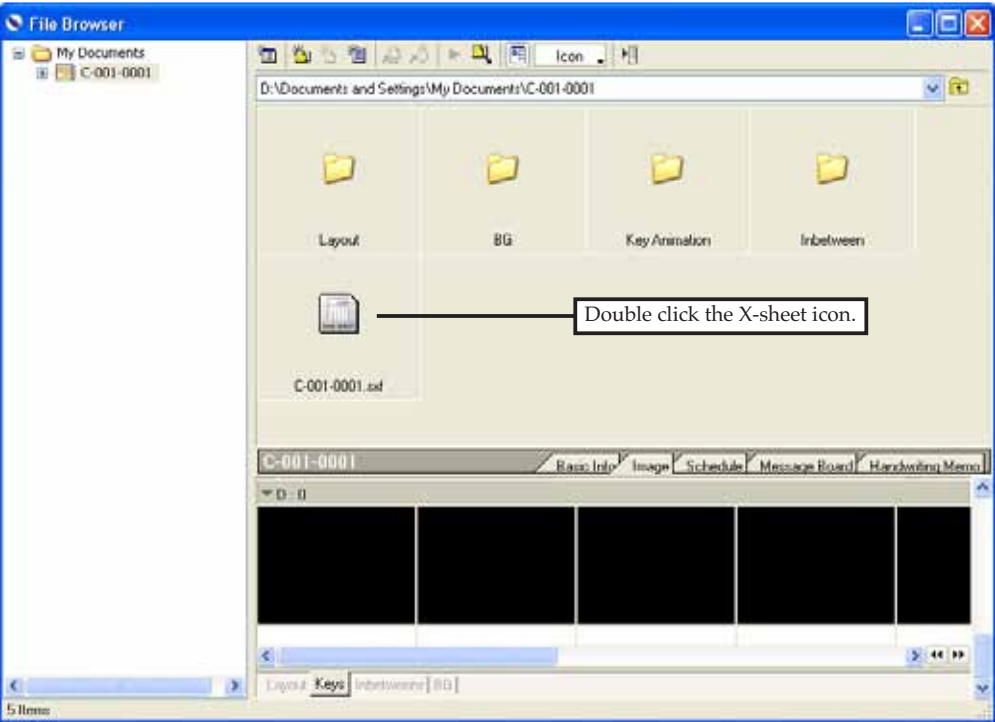
[Others]

- **[Sheet View]**  
Select one of the following units for showing the frames from the pull-down menu.  
[seconds + frames], [frames], [feet], [page, frame number]
- **[Frames Per Page]**  
Specify the maximum number of frames per page.
- **[Guide Line]**  
Specify whether to insert a guide line (separation) at regular intervals to make reading of the X-sheet easier. If you enter "6", for example, a bold line will be shown every 6 frames as separation.

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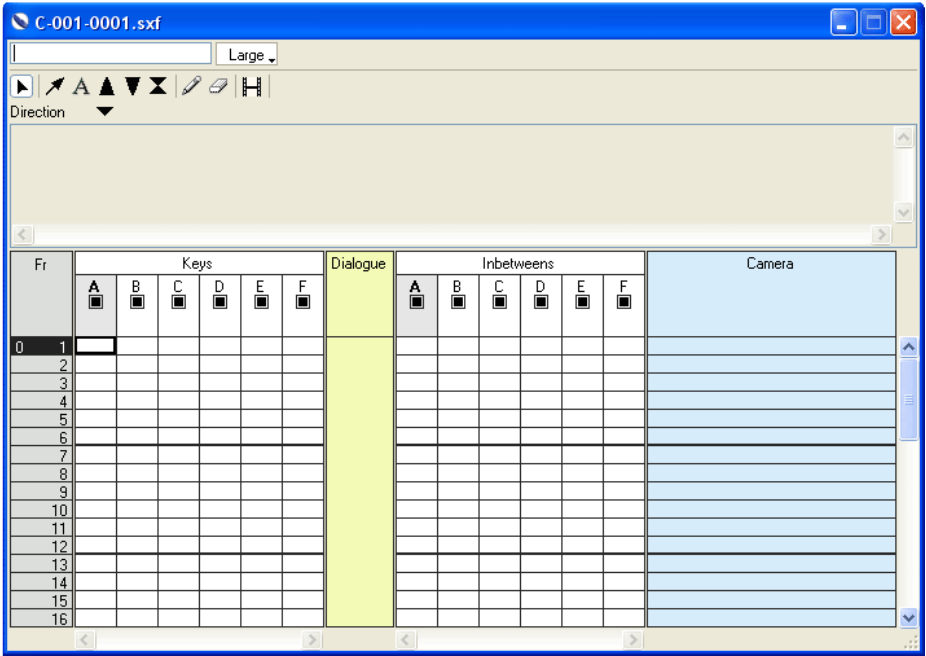
3. X-sheet generation

The new X-sheet is generated and its icon shown on the [File Browser].



4. Opening an X-sheet

To open an [X-sheet Window], double click the X-sheet icon on the [File Browser].



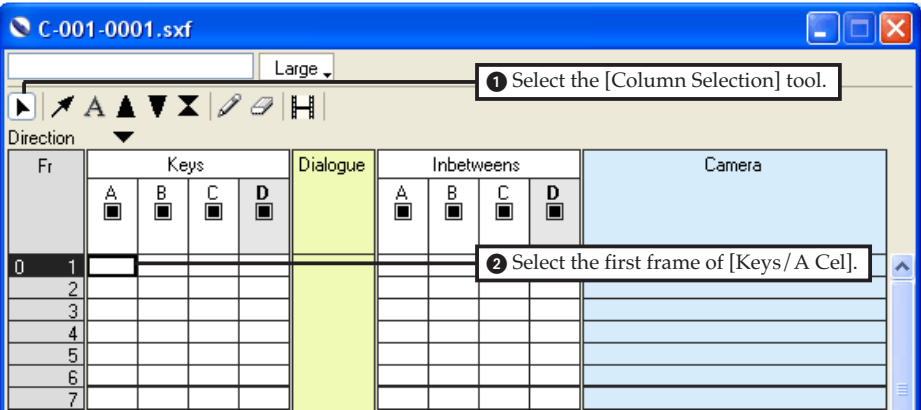
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Entering the key and inbetween numbers

The procedure for assembling an X-sheet by entering the key numbers and signs is as follows.

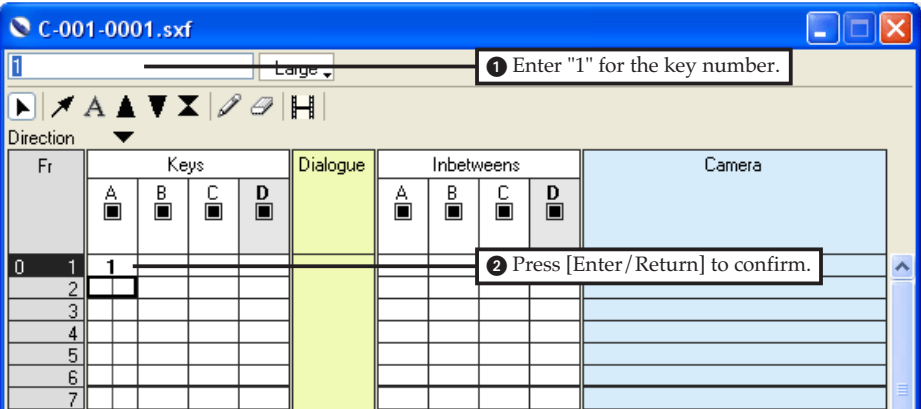
1. Select the target frame.

Select the [Column Selection] tool from the tool bar on the [X-sheet Window] and select the frame in which you want to enter the key number.



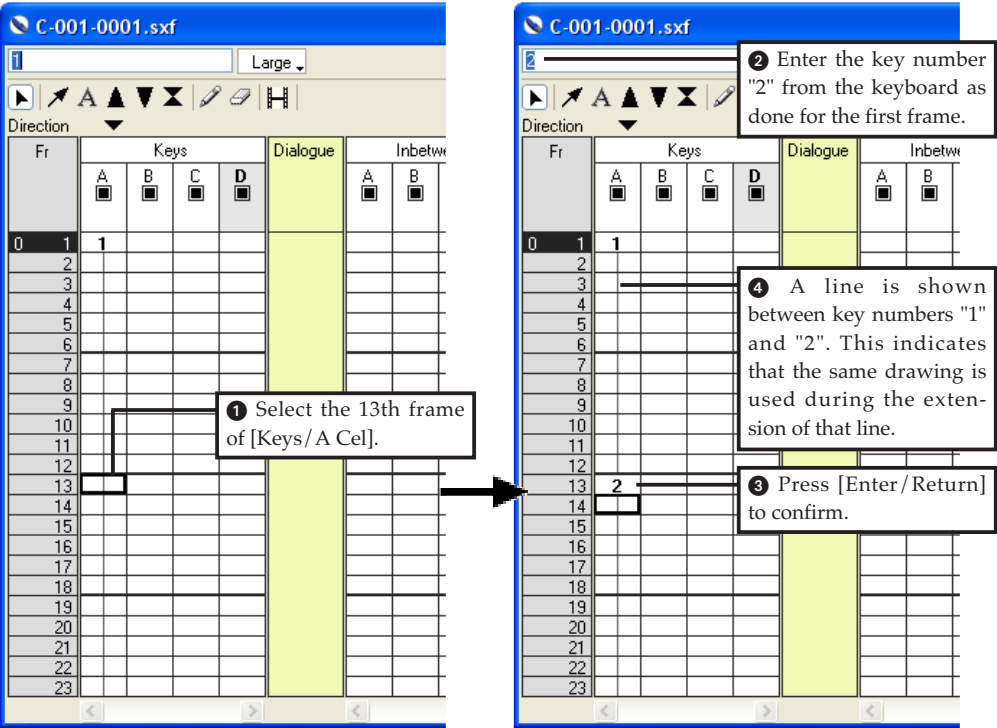
2. Enter the key number in the Input box.

Enter the key number in the Input box that has been enabled using the keyboard.



3. Enter the next key number.

Select the frame for the next key and enter the key number from the keyboard as done for the first frame.



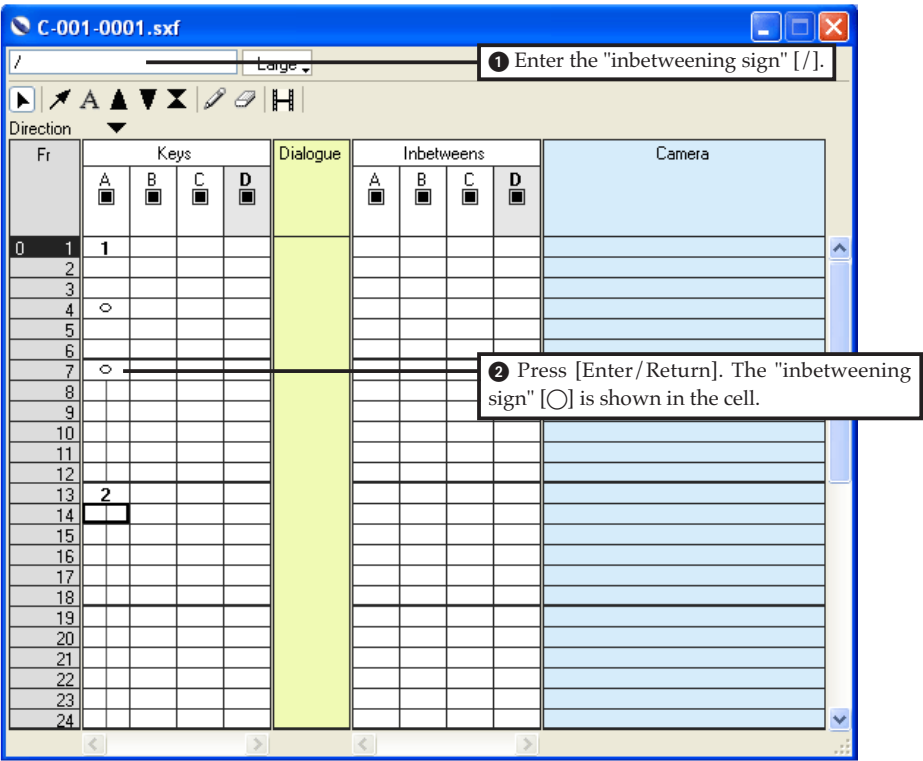
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4. Enter the inbetweening sign.

Enter the inbetweening direction between the key numbers "1" and "2". In RETAS!PRO, an inbetweening direction is given using an "inbetweening sign". The method for entering an inbetweening sign is similar to that for entering a key number.

Signs that can be used for directions (e.g., inbetweening) are as follows.

- Inbetweening sign ○ [ / ] key
- Reverse inbetweening sign ● [ - ] key
- Empty cell sign × [ \* ] key



Tips

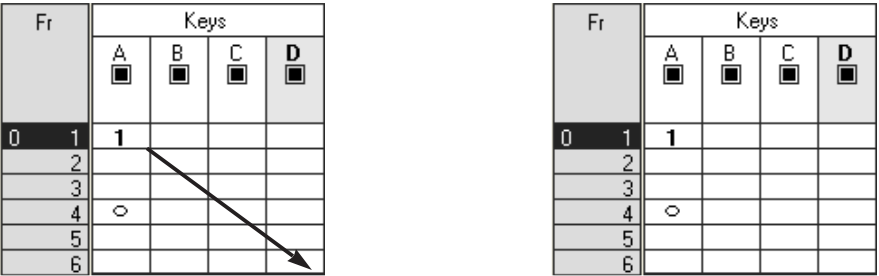
- Only single-byte alphanumeric characters can be used for a key or inbetween number.
- To correct an entered value, select the frame and reenter from the Input box.
- The line between the key numbers does not shown if the difference between them is less than 2 frames.
- Inbetweening sign and reverse inbetweening sign cannot be entered in the inbetween columns.

Selecting multiple data cells

The followings are methods for selecting multiple data cells.

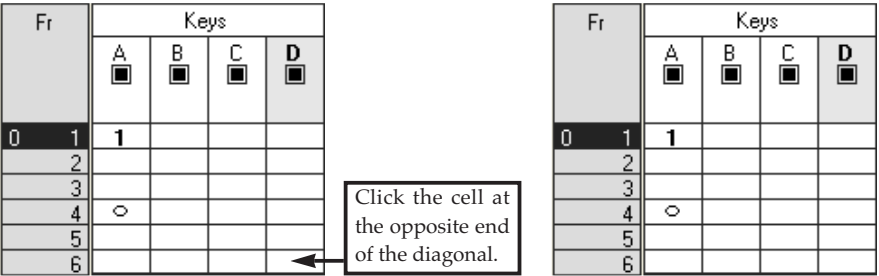
Method 1 Drag

Drag the area of the X-sheet to select with the [Column Selection] tool. The selected [Data Cells] are shown enclosed in a bold black frame and highlighted.



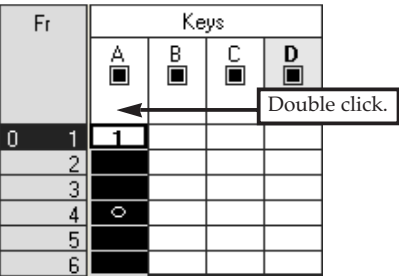
Method 2 Shift-Click

Click the starting [Data Cell], then click the end [Data Cell] with the [Shift] key held down at the opposite end of the diagonal. The selected [Data Cells] are shown enclosed in a bold black frame and highlighted.



Method 3 Selecting all data cells of a Cel layer

Double click the [Cel] title bar at the top of the [Cel] layer. All [Data Cells] from the first to the last in the corresponding [Cel] layer are selected.



Tips

When dragging, the first [Data Cell] is not highlighted.

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Transferring inbetween numbers

The procedure for generating the inbetween numbers automatically and then transfer based on the key number and the inbetweening direction is as follows.

1. Select the transfer source and destination.

Open the X-sheet in which you want to transfer the inbetween numbers, and select the transfer source and destination [Cels].

| Fr | Keys |   |   |   | Dialogue | Inbetweens |   |   |   |
|----|------|---|---|---|----------|------------|---|---|---|
|    | A    | B | C | D |          | A          | B | C | D |
| 0  | 1    |   |   |   |          |            |   |   |   |
| 1  | 1    |   |   |   |          |            |   |   |   |
| 2  |      |   |   |   |          |            |   |   |   |
| 3  |      |   |   |   |          |            |   |   |   |
| 4  | ○    |   |   |   |          |            |   |   |   |
| 5  |      |   |   |   |          |            |   |   |   |
| 6  |      |   |   |   |          |            |   |   |   |
| 7  | ○    |   |   |   |          |            |   |   |   |
| 8  |      |   |   |   |          |            |   |   |   |
| 9  |      |   |   |   |          |            |   |   |   |
| 10 |      |   |   |   |          |            |   |   |   |
| 11 |      |   |   |   |          |            |   |   |   |
| 12 |      |   |   |   |          |            |   |   |   |
| 13 | 2    |   |   |   |          |            |   |   |   |
| 14 |      |   |   |   |          |            |   |   |   |
| 15 | ○    |   |   |   |          |            |   |   |   |
| 16 |      |   |   |   |          |            |   |   |   |
| 17 |      |   |   |   |          |            |   |   |   |
| 18 |      |   |   |   |          |            |   |   |   |
| 19 | 3    |   |   |   |          |            |   |   |   |
| 20 |      |   |   |   |          |            |   |   |   |
| 21 |      |   |   |   |          |            |   |   |   |
| 22 |      |   |   |   |          |            |   |   |   |
| 23 | ○    |   |   |   |          |            |   |   |   |
| 24 |      |   |   |   |          |            |   |   |   |

2. Select the menu.

Select [Transfer Inbetween Numbers] from the [X-sheet] menu.

|                            |   |
|----------------------------|---|
| X-sheet                    |   |
| Motion Check               | ▶ |
| Transfer Inbetween Numbers |   |
| Layer                      | ▶ |
| Frame                      | ▶ |
| Sound                      | ▶ |
| View                       | ▶ |
| Sheet Settings             | ▶ |

3. Completion

The inbetween numbers generated based on the key number and inbetweening sign registered in the [Keys] column are transferred to the [Inbetweens] column.

| Fr | Keys |   |   |   | Dialogue | Inbetweens |   |   |   |
|----|------|---|---|---|----------|------------|---|---|---|
|    | A    | B | C | D |          | A          | B | C | D |
| 0  | 1    |   |   |   |          | 1          |   |   |   |
| 1  |      |   |   |   |          |            |   |   |   |
| 2  |      |   |   |   |          |            |   |   |   |
| 3  |      |   |   |   |          |            |   |   |   |
| 4  | ○    |   |   |   |          | 2          |   |   |   |
| 5  |      |   |   |   |          |            |   |   |   |
| 6  |      |   |   |   |          |            |   |   |   |
| 7  | ○    |   |   |   |          | 3          |   |   |   |
| 8  |      |   |   |   |          |            |   |   |   |
| 9  |      |   |   |   |          |            |   |   |   |
| 10 |      |   |   |   |          |            |   |   |   |
| 11 |      |   |   |   |          |            |   |   |   |
| 12 |      |   |   |   |          |            |   |   |   |
| 13 | 2    |   |   |   |          | 4          |   |   |   |
| 14 |      |   |   |   |          |            |   |   |   |
| 15 | ○    |   |   |   |          | 5          |   |   |   |
| 16 |      |   |   |   |          |            |   |   |   |
| 17 |      |   |   |   |          |            |   |   |   |
| 18 |      |   |   |   |          |            |   |   |   |
| 19 | 3    |   |   |   |          | 6          |   |   |   |
| 20 |      |   |   |   |          |            |   |   |   |
| 21 |      |   |   |   |          |            |   |   |   |
| 22 |      |   |   |   |          |            |   |   |   |
| 23 | ○    |   |   |   |          | 7          |   |   |   |
| 24 |      |   |   |   |          |            |   |   |   |

Tips

Make sure to check the inbetween numbers as transfer using [Transfer Inbetween Numbers] fails occasionally. If [Transfer Inbetween Numbers] failed to transfer the inbetween numbers correctly, overwrite the correct numbers.

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## Entering a dialogue

The procedure for entering the dialogue the characters speak in the scene in the [Dialogue] column using text is as follows. The dialogue registered in the [Dialogue] column is shown on the screen during the motion check.

### 1. Select the Dialogue column.

Select the range of the [Dialogue] column to which the dialogue will apply. The selected data cells are shown enclosed in a bold black frame and highlighted.

The screenshot shows a spreadsheet titled 'C-001-0001.sxf'. The interface includes a menu bar, a toolbar with various icons, and a spreadsheet grid. The grid has columns labeled 'Fr', 'Keys', and 'Dialogue'. The 'Keys' column has sub-columns 'A', 'B', 'C', and 'D'. The 'Dialogue' column is highlighted in yellow. The 'Fr' column contains values 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24. The 'Keys' column has values 1, 2, 3. The 'Dialogue' column is empty. Two annotations are present: one pointing to the title bar of the 'Dialogue' column with the text 'To select the entire column, double click the title bar of the [Dialogue] column.', and another pointing to the 'Dialogue' column with the text 'To limit the input of the dialogue to a specific range, use the [Column Selection] tool and drag it over the [Dialogue] column along the range you want to select.'

## 2. Enter the dialogue.

Enter the dialogue in the Input box that has been enabled using the keyboard.

C-001-0001.sxf

I am energetic today. Large

Direction

| Fr | Keys                     |                          |                          |                          | Dialogue |
|----|--------------------------|--------------------------|--------------------------|--------------------------|----------|
|    | A                        | B                        | C                        | D                        |          |
|    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |          |

Enter the dialogue.

### 3. Completion

Press [Enter/Return] to confirm. The dialogue is shown in the Dialogue column.

C-001-0001.sxf

I am energetic today. Large

Direction

Fr

Keys

A B C D

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

Dialogue

Dialogue

## Tips

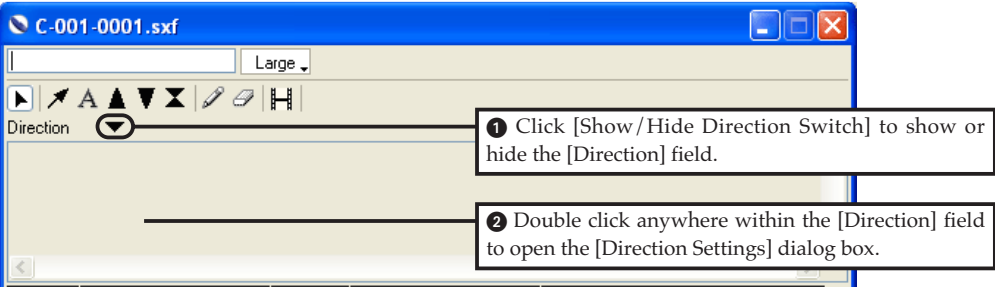
Do not use fonts and symbols specific to a given computer model.

Entering a shooting direction 1

The procedure for entering a text in the [Direction] field is as follows.

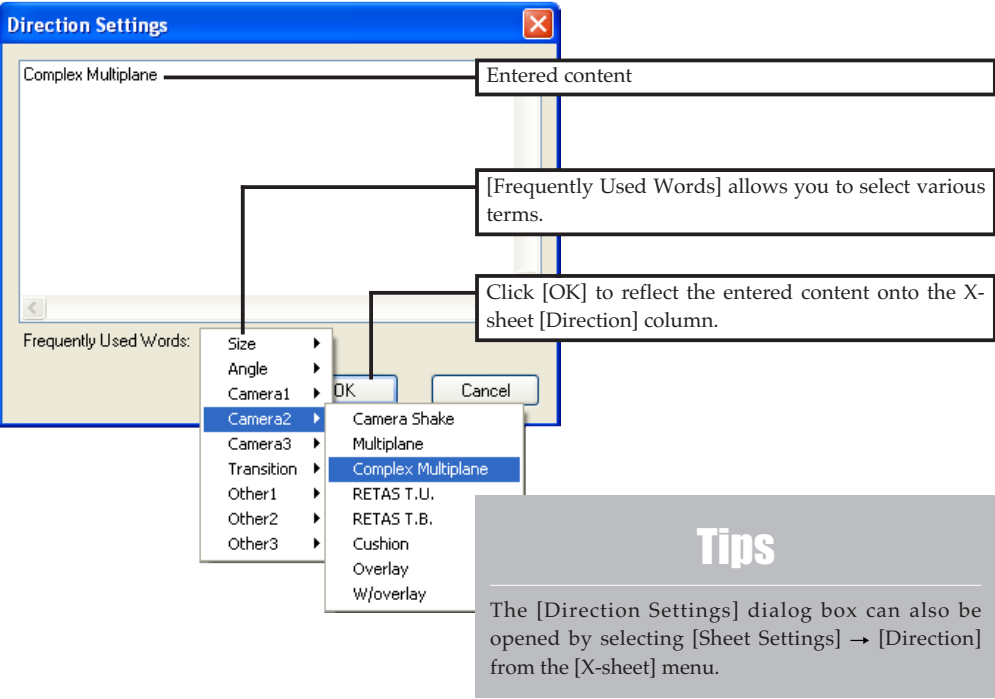
1. Open the Direction field.

Open the [Direction] field in the X-sheet.



2. Enter the text in the Direction Settings dialog box.

The [Direction Settings] dialog box allows you to enter a shooting direction, for example, using the keyboard.

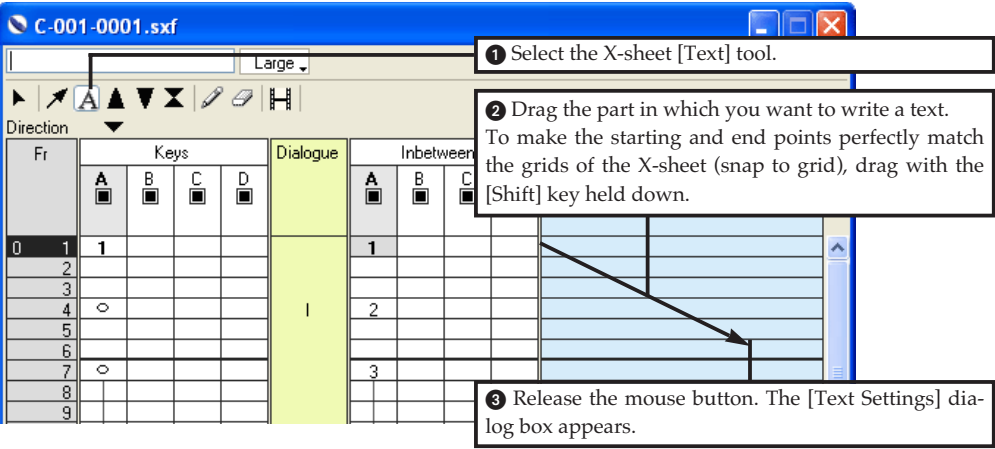


Entering a shooting direction 2

The procedure to create a text box on the X-sheet using the [Text] tool and enter a text in it is as follows. This is mainly used for entering shooting directions in the [Camera] column.

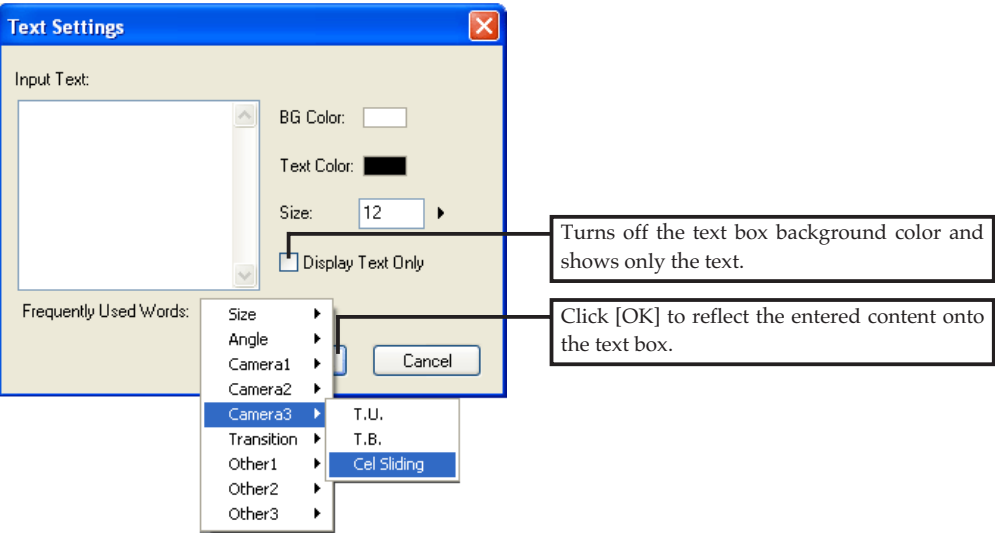
1. Select the Text tool.

Select the X-sheet [Text] tool and create a text box.



2. Enter the direction in the Text Settings dialog box.

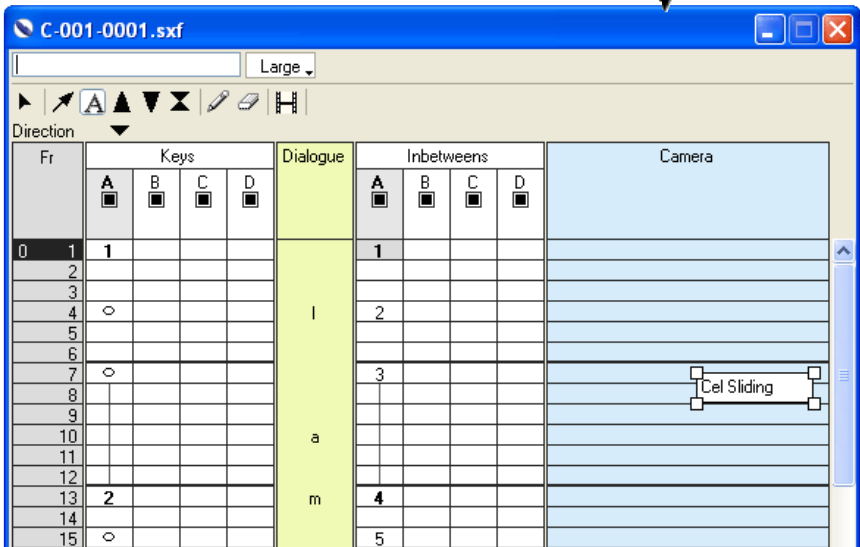
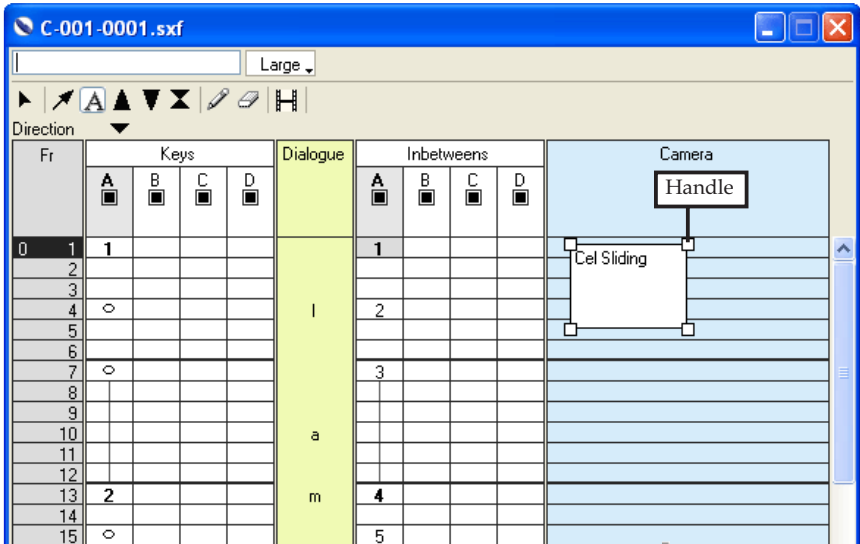
The [Text Settings] dialog box allows you to enter a text as well as configure settings.



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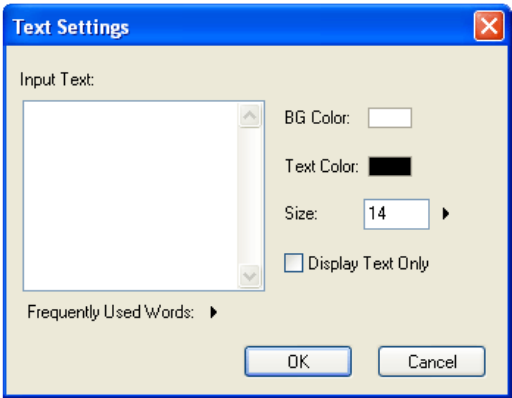
3. Moving and resizing the text box

To move, select the [Text] tool, place the mouse pointer anywhere within the text box and drag.  
To resize, drag any of the handles at the corners of the text box.



4. Reconfiguring the text settings

To edit the text or change the settings, double click the text box and open the [Text Settings] dialog box again.



Text Settings dialog box

- **[Input Text]**  
Enter the text from the keyboard.
- **[Frequently Used Words] popup menu**  
The popup menu allows you to enter terms frequently used in the production of animations through selection.
- **[BG Color]**  
Click the button to select the text box (the rectangular area in which the text is shown) color.
- **[Text Color]**  
Click the button to select the font color.
- **[Size]**  
Specify a font (letter) size in the 4 - 48 range.
- **[Display Text Only]**  
Select this check box to show only the text without showing the text box.
- **[OK] button**  
Confirms the settings.
- **[Cancel] button**  
Cancels the settings and closes the dialog box.

Tips

A text box cannot be created over multiple columns or moved from one column to another.

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Entering a handwritten shooting direction

The procedure to use the graphics tablet pen and write a shooting direction directly on the X-sheet is as follows. This is convenient for writing directions difficult to enter using the text tool alone.

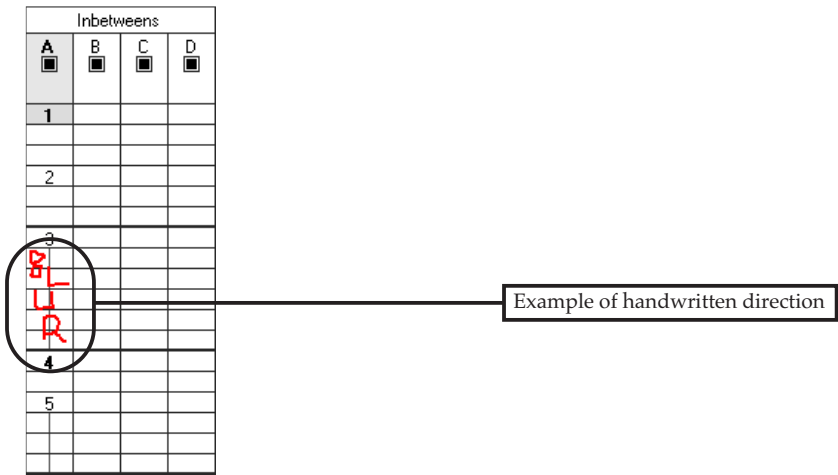
1. Select the Pen tool.

Select the X-sheet [Pen] tool.  
Double click the [Pen] tool icon. The [Pen Settings] dialog box that allows you to select the pen size and the color appears. Selectable size ranges 1 - 10, and colors are: black, red, green, blue, yellow, pink, and light blue.



2. Write with the pen.

Use the graphics tablet pen and write the shooting direction, for example, in any of the columns among [Keys], [Inbetweens], [Dialogue], and [Camera].



3. Erasing a handwritten direction

Handwritten directions can be erased using the X-sheet [Eraser] tool.  
Double click the [Eraser] tool icon. The [Eraser Settings] dialog box that allows you to select the eraser size in the 1 - 20 range appears.  
When erasing, it may appear as if the whole data cell(s) is (are) erased. However, the content of the data cell(s) remains and only the handwritten part will be erased.



Tips

A handwritten text cannot extend over multiple columns.

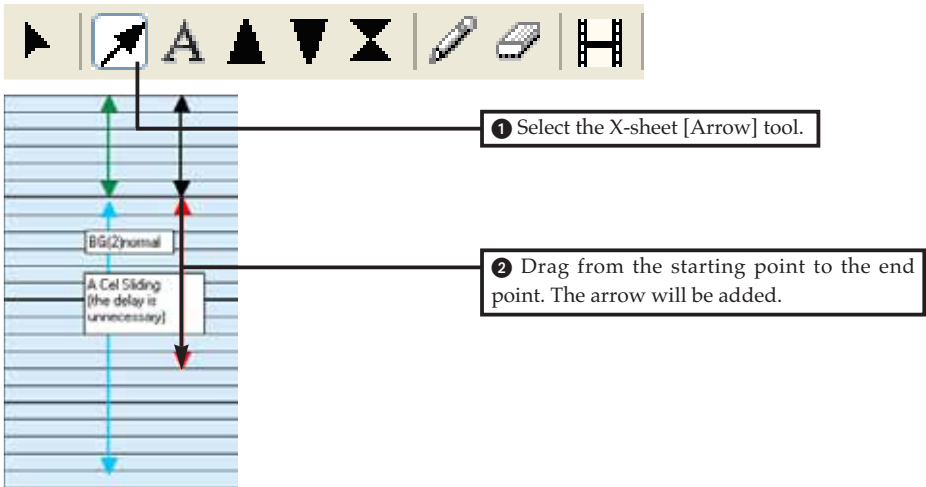
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Creating an arrow

The procedure for adding an arrow of a shooting direction such as T. U. (track up) to the Camera column is as follows.

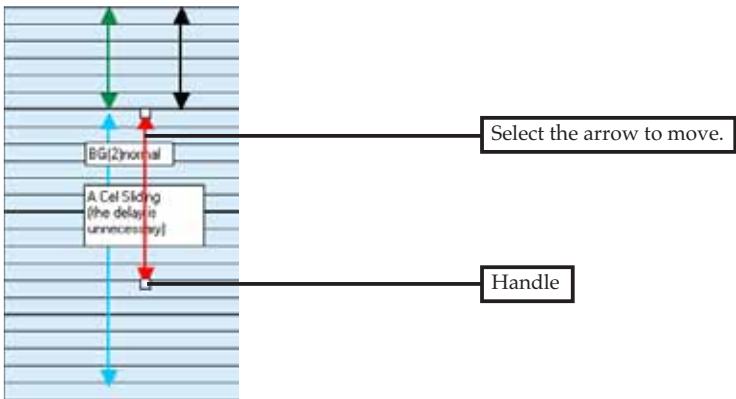
1. Select the Arrow tool and drag.

Select the [X-sheet] window [Arrow] tool and drag it from the starting point to the end point of the arrow you want to draw.  
To make the starting and end points perfectly match the grids of the X-sheet (snap to grid), drag with the [Shift] key held down.



2. Moving the arrow

To move the arrow position, select the arrow with the [Arrow] tool and drag.  
To change the arrow's length or angle, drag one of its handles.



3. Configuring the detailed arrow settings

Select the [Arrow] tool and double click the arrow on the X-sheet. The [Arrow Settings] dialog box that allows you to configure the detailed settings appears.



- **[Style]**  
Select the place to add the arrow from among the following options.  
[Add Arrow to Starting Point], [Add Arrow to End Point], [Add Arrow to Starting and End Points]
- **[Width]**  
Specify the line width.
- **[Color]**  
Click the [Foreground Color] button to open the Color Settings panel. Selecting a color there changes the line color.
- **[OK] button**  
Confirms the settings.
- **[Cancel] button**  
Cancels the settings and closes the dialog box.

4. Deleting an arrow

To delete an arrow, select the arrow with the [Arrow] tool and press [Delete].

Tips

An arrow cannot be created over multiple columns or moved from one column to another.

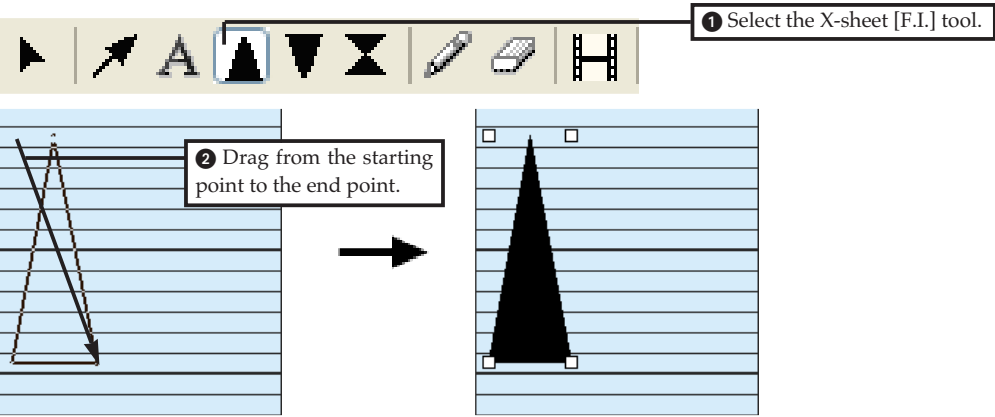
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Entering an optical markup sign

The procedure for drawing an [F.I. (Fade In)], [F.O. (Fade Out)], or [O.L. (Overlap)] markup sign is as follows. The procedure explained here is for [F.I. (Fade In)]. However, it is the same for [F.O. (Fade Out)] and [O.L. (Overlap)].

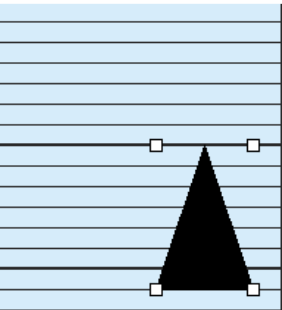
1 Select the [F.I. (Fade In)] tool.

Select the [X-sheet] window [F.I.] tool and drag it from the starting point to the end point of the F.I. markup sign you want to draw.  
To make the starting and end points perfectly match the grids of the X-sheet (snap to grid), drag with the [Shift] key held down.



2. Moving a F.I. (Fade In) markup sign

To move, select the [F.I.] tool and drag the F.I. markup sign.  
To change the F.I. markup sign's length or angle, drag one of its handles.



3. Deleting a F.I. (Fade In) markup sign

To delete a F.I. markup sign, select the F.I. markup sign with the [F.I.] tool and press [Delete].

Tips

A markup sign cannot be created over multiple columns or moved from one column to another.

Importing a sound file

The procedure for importing a sound file to the [Sound] column and playing it along with the images is as follows.

Supported formats: WAV, AIF, AIFF

1. Select a sound file.

Select [Sound] → [Import...] from the [X-Sheet] menu. The [Open] dialog box appears.  
In the [Open] dialog box, select the sound file to import to the [Sound] column.

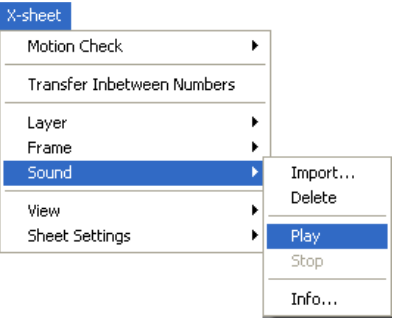
2. Import and show the sound file.

When the import is complete, the sound wave is shown in the X-sheet [Sound] column.

| Fr | Keys |   |   |   | Dialogue | Sound | Inbetweens |   |   |   | Camera |
|----|------|---|---|---|----------|-------|------------|---|---|---|--------|
|    | A    | B | C | D |          |       | A          | B | C | D |        |
| 0  | 1    |   |   |   |          |       | 1          |   |   |   |        |
| 1  |      |   |   |   |          |       |            |   |   |   |        |
| 2  |      |   |   |   |          |       |            |   |   |   |        |
| 3  |      |   |   |   |          |       |            |   |   |   |        |
| 4  | ○    |   |   |   |          |       | 2          |   |   |   |        |
| 5  |      |   |   |   |          |       |            |   |   |   |        |
| 6  |      |   |   |   |          |       |            |   |   |   |        |
| 7  | ○    |   |   |   |          |       | 3          |   |   |   |        |
| 8  |      |   |   |   |          |       |            |   |   |   |        |
| 9  |      |   |   |   |          |       |            |   |   |   |        |
| 10 |      |   |   |   |          |       |            |   |   |   |        |
| 11 |      |   |   |   |          |       |            |   |   |   |        |
| 12 |      |   |   |   |          |       |            |   |   |   |        |

3. Play the sound file.

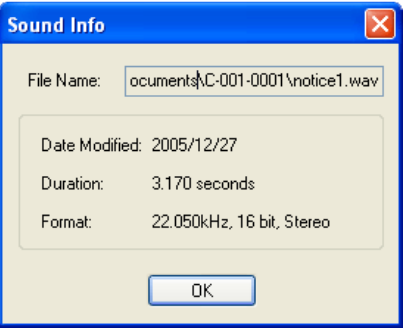
To play the imported sound file, select [Sound] → [Play] from the [X-Sheet] menu. To stop playing, select [Stop].



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4. Showing the sound file information

Select [Sound] → [Info...] from the [X-sheet] menu. The [Sound Info] dialog box appears.



- **[File Name]**  
Shows the location and filename of the sound file.
- **[Date Modified]**  
Shows the date the sound file was last modified.
- **[Duration]**  
Shows the duration of the sound file.
- **[Format]**  
Shows the sampling rate of the sound file and whether it is a mono or stereo sound.

5. Deleting a sound file

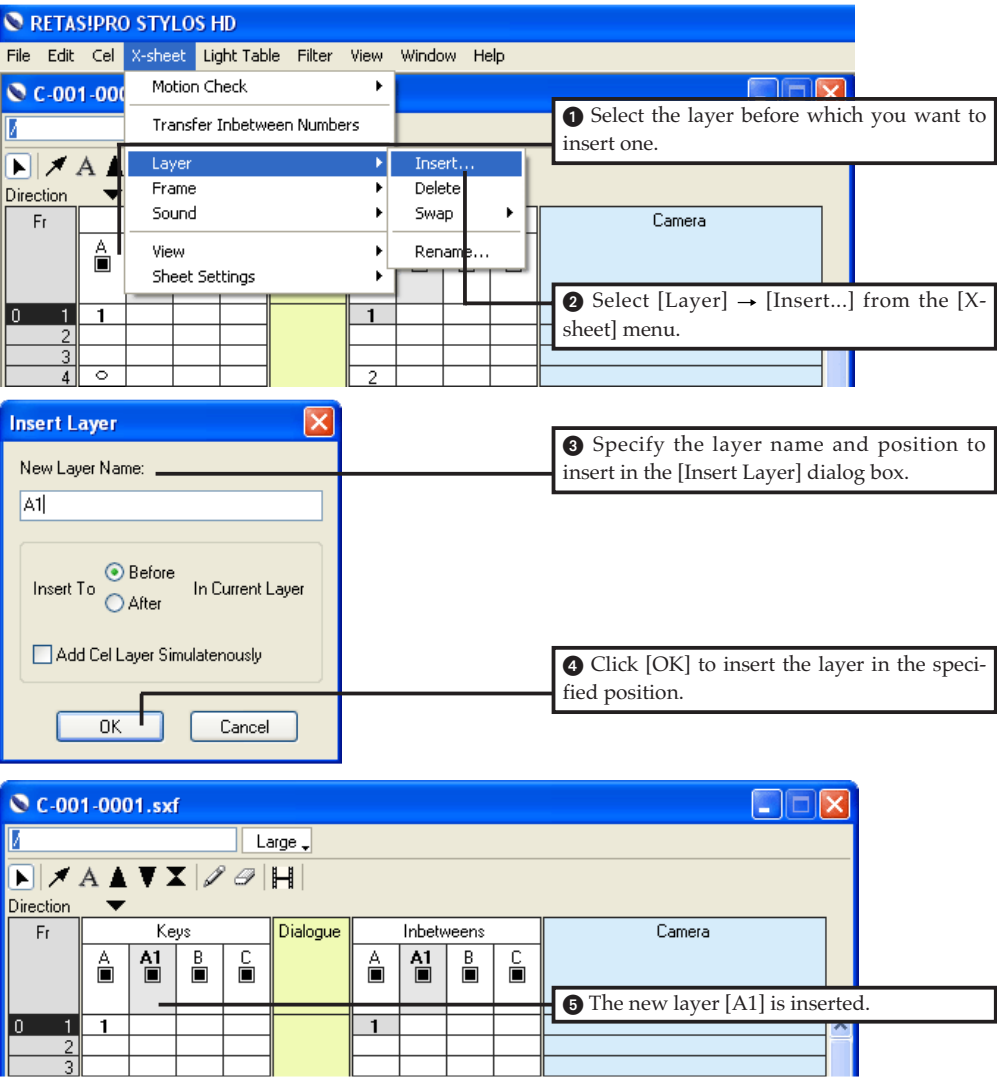
To delete an imported sound file, select [Sound] → [Delete] from the [X-Sheet] menu.

Editing a Layer (column)

The procedures for inserting, deleting, swapping and renaming a layer are as follows.

Inserting a layer

The procedure for inserting a layer is as follows.

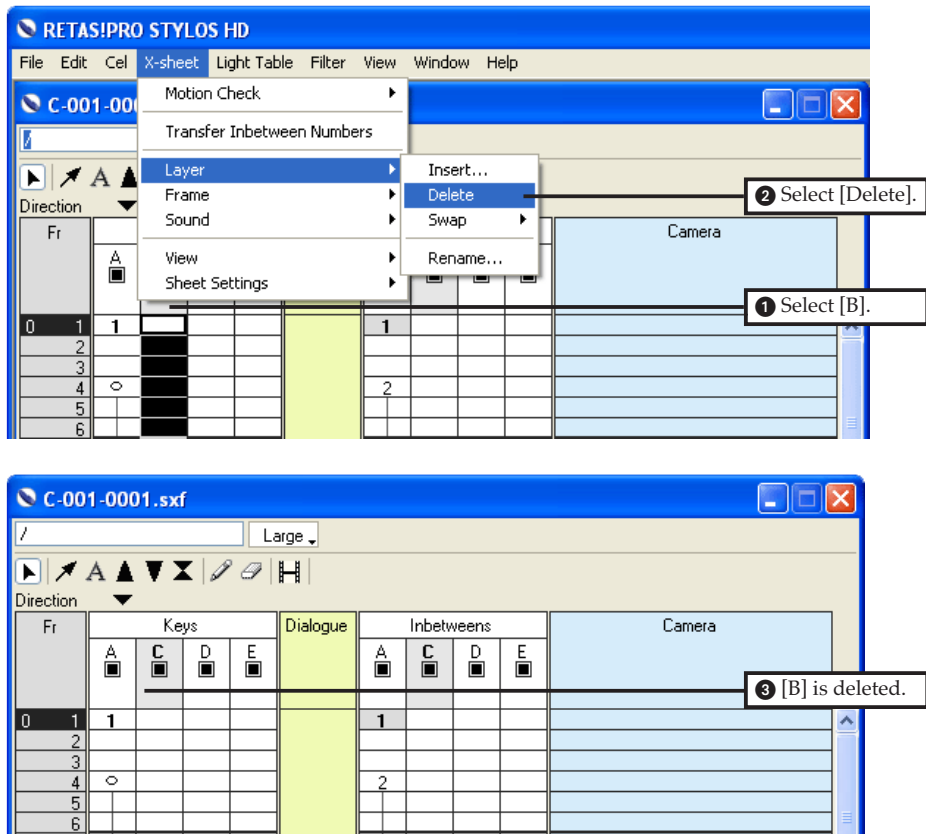


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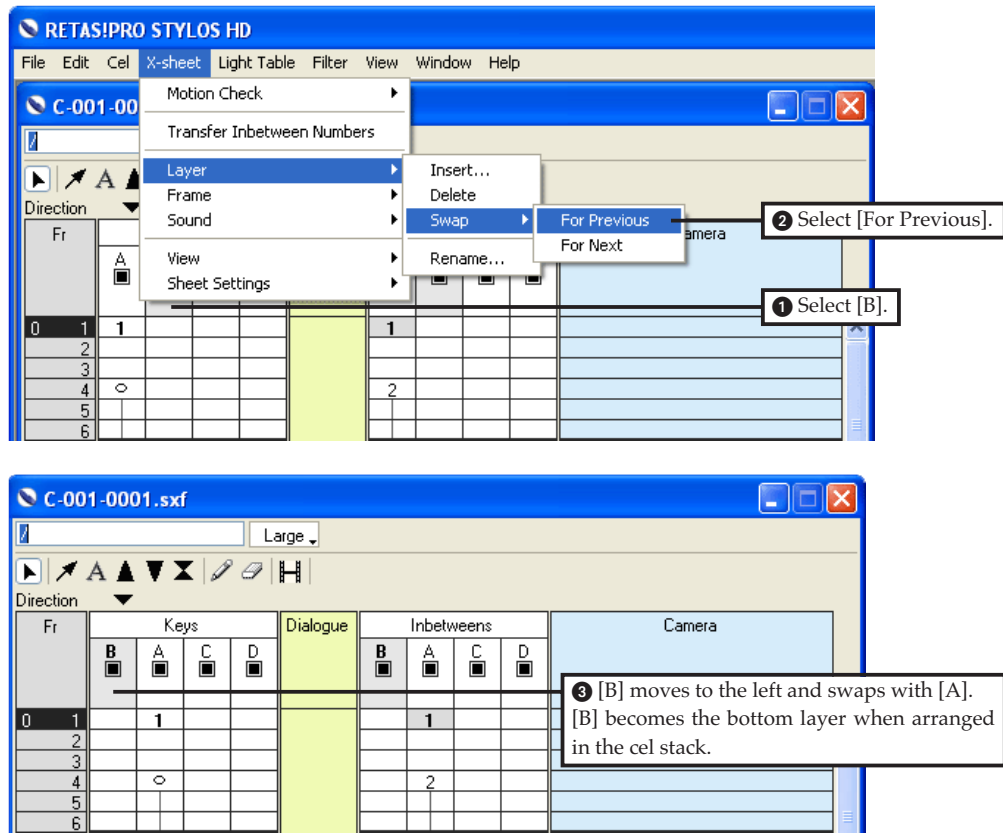
Deleting a layer

To delete, select the layer you want to delete and then [Layer] → [Delete] from the [X-sheet] menu.



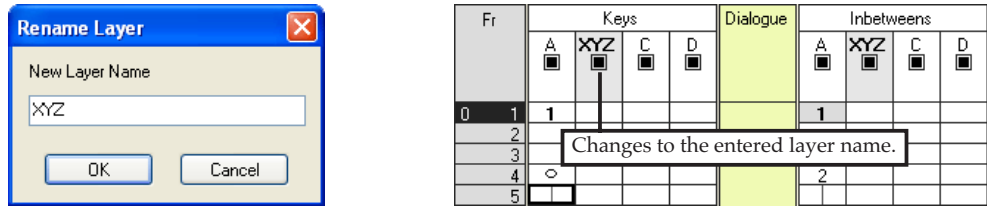
Swapping Layers

To swap, select the layer you want to move and then [Layer] → [Swap] from the [X-sheet] menu.



Renaming a layer

To rename, select the layer you want to rename and then [Layer] → [Rename...] from the [X-sheet] menu. Enter the new name in [New Layer Name] of the [Rename Layer] dialog box. Letters are shown up to third one. Click [OK] to confirm the new layer name.



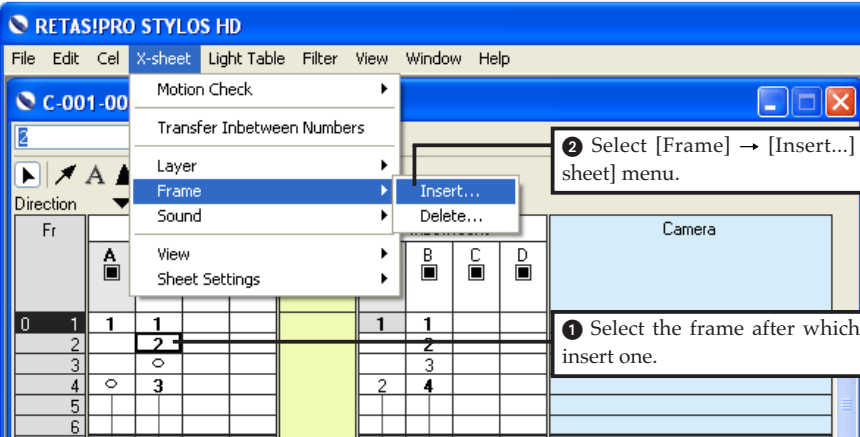
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Editing a Frame (row)

The procedures to insert and delete a frame are as follows.

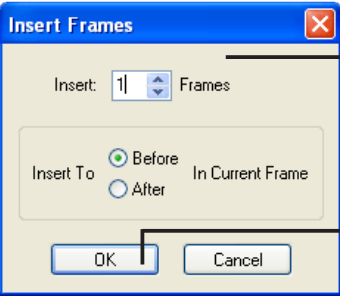
Inserting a frame

The procedure for inserting a frame is as follows.



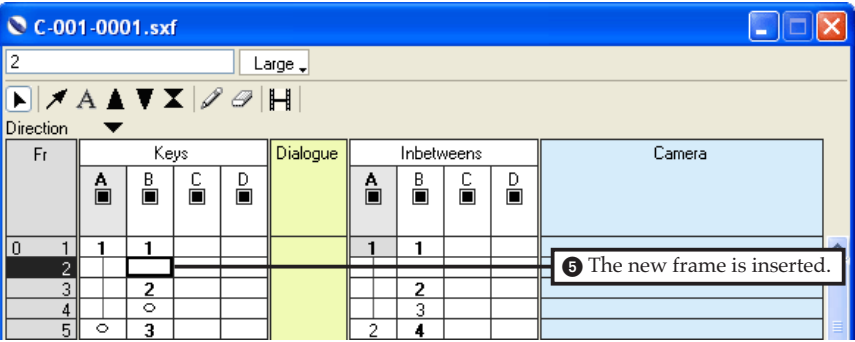
2 Select [Frame] → [Insert...] from the [X-sheet] menu.

1 Select the frame after which you want to insert one.



3 Specify the number of frames and position to insert in the [Insert Frame] dialog box.

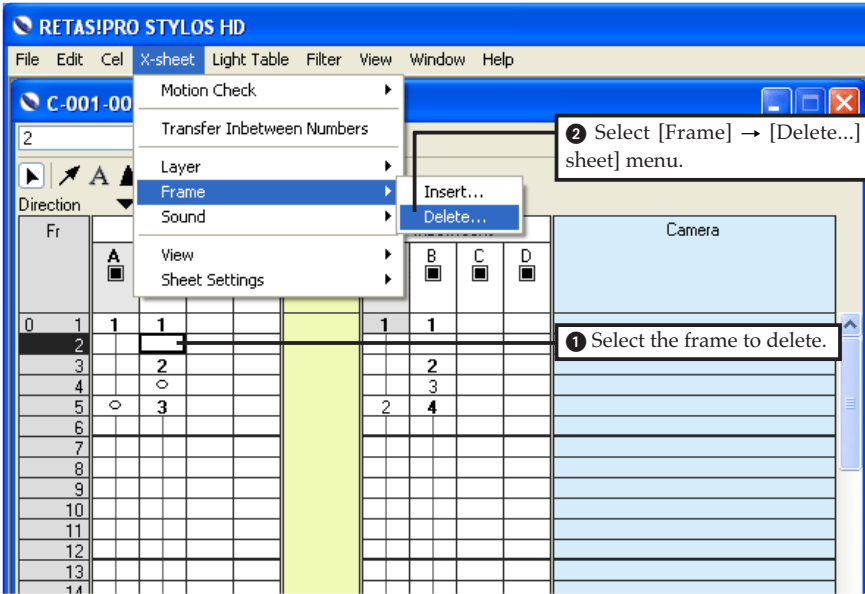
4 Click [OK] to insert the frame in the specified position.



5 The new frame is inserted.

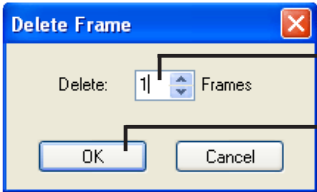
Deleting a frame

To delete, select the frame you want to delete and then [Frame] → [Delete...] from the [X-sheet] menu.



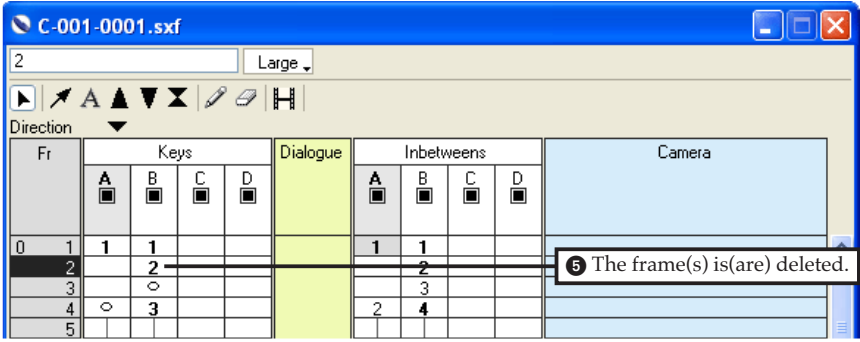
2 Select [Frame] → [Delete...] from the [X-sheet] menu.

1 Select the frame to delete.



3 Specify the number of frames to delete in [Delete] of the [Delete Frame] dialog box.

4 Click [OK] to delete the frame(s) from the specified position.



5 The frame(s) is(are) deleted.

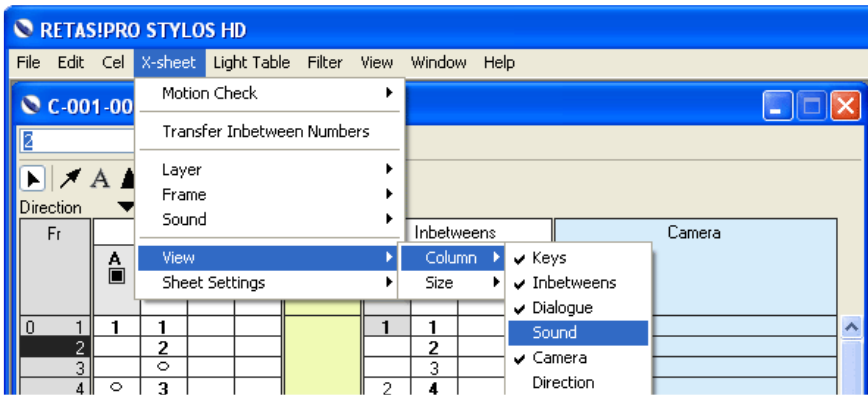
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Viewing the X-sheet

The procedures for showing/hiding an X-sheet column and changing its size are as follows.  
The view can be changed dynamically depending on your needs.

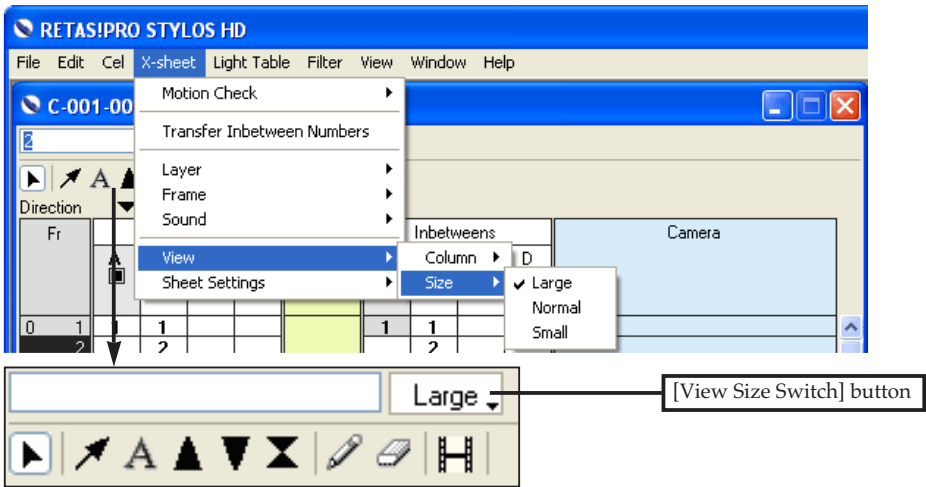
Showing/Hiding a column

To show/hide a column, select/deselect the corresponding item (column) from [View] → [Column] under the [X-sheet] menu. Selected items are those visible. [Sound] is hidden in the default settings.



Changing the size

- To select a view size from among Large, Normal, and Small, use either of the following methods.
- Select from [View] → [Size] under the [X-sheet] menu.  
The selected size is applied.
  - Press the X-sheet [View Size Switch] button.

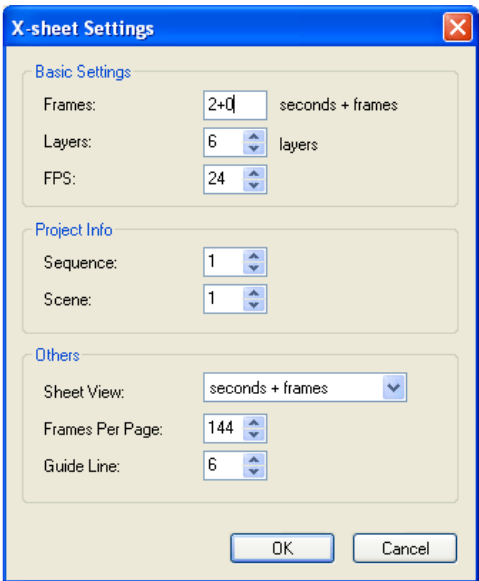


Changing the X-sheet settings

The procedure for changing the X-sheet detailed settings is as follows.

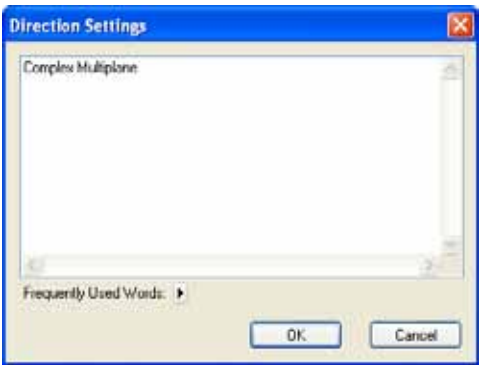
1. X-sheet settings

Select [Sheet Settings] → [General...] from the [X-sheet] menu. The [X-sheet Settings] dialog box that allows you to configure the basic settings, the project information, and other details appears.



2. Direction settings

Select [Sheet Settings] → [Direction...] from the [X-sheet] menu. The [Direction Settings] dialog box that allows you to change the direction column content appears.



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Saving an X-sheet

Select [Save] from the [File] menu.  
Save frequently to reduce the amount of data loss in case of power failure or computer problem.

Reverting an X-sheet

Select [Revert] from the [File] menu.  
The X-sheet is returned to the last saved content. Use this command to recover from a wrong operation or when you want to discard all the changes made.

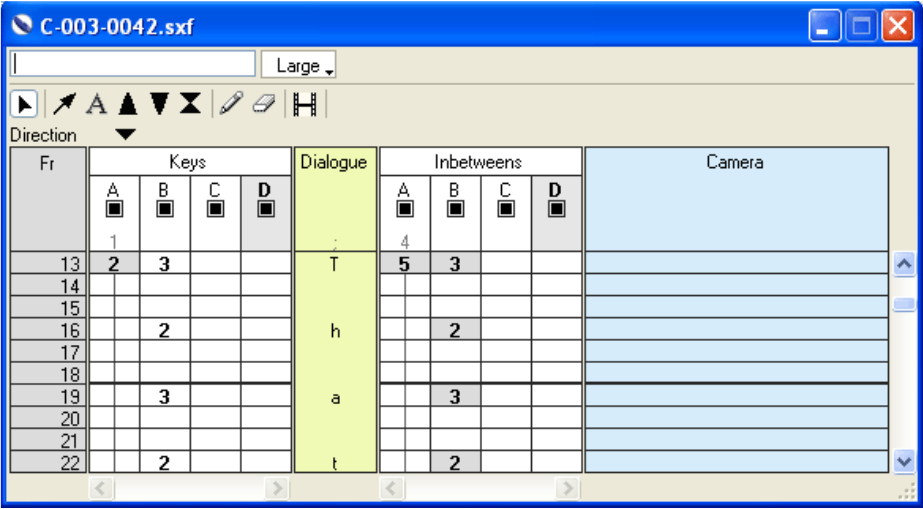
Printing an X-sheet

Open the X-sheet you want to print by double clicking its icon. Select [Page Setup...] from the [File] menu and configure the page settings.  
Then, select [Print...] from the [File] menu. For details on the setting items in each dialog box, refer to the OS or printer manual.

| Title                                                             |          |          |          |       |          |       |          |      |          |
|-------------------------------------------------------------------|----------|----------|----------|-------|----------|-------|----------|------|----------|
| Episode No. 3 Magical Girl Mai                                    |          |          |          |       |          |       |          |      |          |
| [Don't back up! This is a backup of the data. There is a backup.] |          |          |          |       |          |       |          |      |          |
| Sequence/Scene                                                    |          | Sequence |          | Scene |          | Page  |          |      |          |
| 1 - 42                                                            |          | 4        |          | + 12  |          | 1 / 1 |          |      |          |
| Main                                                              |          |          |          |       |          |       |          |      |          |
| Shot                                                              | Time     | Shot     | Time     | Shot  | Time     | Shot  | Time     | Shot | Time     |
| 1                                                                 | 00:00:00 | 2        | 00:00:01 | 3     | 00:00:02 | 4     | 00:00:03 | 5    | 00:00:04 |
| 6                                                                 | 00:00:05 | 7        | 00:00:06 | 8     | 00:00:07 | 9     | 00:00:08 | 10   | 00:00:09 |
| 11                                                                | 00:00:10 | 12       | 00:00:11 | 13    | 00:00:12 | 14    | 00:00:13 | 15   | 00:00:14 |
| 16                                                                | 00:00:15 | 17       | 00:00:16 | 18    | 00:00:17 | 19    | 00:00:18 | 20   | 00:00:19 |
| 21                                                                | 00:00:20 | 22       | 00:00:21 | 23    | 00:00:22 | 24    | 00:00:23 | 25   | 00:00:24 |
| 26                                                                | 00:00:25 | 27       | 00:00:26 | 28    | 00:00:27 | 29    | 00:00:28 | 30   | 00:00:29 |
| 31                                                                | 00:00:30 | 32       | 00:00:31 | 33    | 00:00:32 | 34    | 00:00:33 | 35   | 00:00:34 |
| 36                                                                | 00:00:35 | 37       | 00:00:36 | 38    | 00:00:37 | 39    | 00:00:38 | 40   | 00:00:39 |
| 41                                                                | 00:00:40 | 42       | 00:00:41 | 43    | 00:00:42 | 44    | 00:00:43 | 45   | 00:00:44 |
| 46                                                                | 00:00:45 | 47       | 00:00:46 | 48    | 00:00:47 | 49    | 00:00:48 | 50   | 00:00:49 |
| 51                                                                | 00:00:50 | 52       | 00:00:51 | 53    | 00:00:52 | 54    | 00:00:53 | 55   | 00:00:54 |
| 56                                                                | 00:00:55 | 57       | 00:00:56 | 58    | 00:00:57 | 59    | 00:00:58 | 60   | 00:00:59 |
| 61                                                                | 00:01:00 | 62       | 00:01:01 | 63    | 00:01:02 | 64    | 00:01:03 | 65   | 00:01:04 |
| 66                                                                | 00:01:05 | 67       | 00:01:06 | 68    | 00:01:07 | 69    | 00:01:08 | 70   | 00:01:09 |
| 71                                                                | 00:01:10 | 72       | 00:01:11 | 73    | 00:01:12 | 74    | 00:01:13 | 75   | 00:01:14 |
| 76                                                                | 00:01:15 | 77       | 00:01:16 | 78    | 00:01:17 | 79    | 00:01:18 | 80   | 00:01:19 |
| 81                                                                | 00:01:20 | 82       | 00:01:21 | 83    | 00:01:22 | 84    | 00:01:23 | 85   | 00:01:24 |
| 86                                                                | 00:01:25 | 87       | 00:01:26 | 88    | 00:01:27 | 89    | 00:01:28 | 90   | 00:01:29 |
| 91                                                                | 00:01:30 | 92       | 00:01:31 | 93    | 00:01:32 | 94    | 00:01:33 | 95   | 00:01:34 |
| 96                                                                | 00:01:35 | 97       | 00:01:36 | 98    | 00:01:37 | 99    | 00:01:38 | 100  | 00:01:39 |
| 101                                                               | 00:01:40 | 102      | 00:01:41 | 103   | 00:01:42 | 104   | 00:01:43 | 105  | 00:01:44 |
| 106                                                               | 00:01:45 | 107      | 00:01:46 | 108   | 00:01:47 | 109   | 00:01:48 | 110  | 00:01:49 |
| 111                                                               | 00:01:50 | 112      | 00:01:51 | 113   | 00:01:52 | 114   | 00:01:53 | 115  | 00:01:54 |
| 116                                                               | 00:01:55 | 117      | 00:01:56 | 118   | 00:01:57 | 119   | 00:01:58 | 120  | 00:01:59 |
| 121                                                               | 00:02:00 | 122      | 00:02:01 | 123   | 00:02:02 | 124   | 00:02:03 | 125  | 00:02:04 |
| 126                                                               | 00:02:05 | 127      | 00:02:06 | 128   | 00:02:07 | 129   | 00:02:08 | 130  | 00:02:09 |
| 131                                                               | 00:02:10 | 132      | 00:02:11 | 133   | 00:02:12 | 134   | 00:02:13 | 135  | 00:02:14 |
| 136                                                               | 00:02:15 | 137      | 00:02:16 | 138   | 00:02:17 | 139   | 00:02:18 | 140  | 00:02:19 |
| 141                                                               | 00:02:20 | 142      | 00:02:21 | 143   | 00:02:22 | 144   | 00:02:23 | 145  | 00:02:24 |
| 146                                                               | 00:02:25 | 147      | 00:02:26 | 148   | 00:02:27 | 149   | 00:02:28 | 150  | 00:02:29 |
| 151                                                               | 00:02:30 | 152      | 00:02:31 | 153   | 00:02:32 | 154   | 00:02:33 | 155  | 00:02:34 |
| 156                                                               | 00:02:35 | 157      | 00:02:36 | 158   | 00:02:37 | 159   | 00:02:38 | 160  | 00:02:39 |
| 161                                                               | 00:02:40 | 162      | 00:02:41 | 163   | 00:02:42 | 164   | 00:02:43 | 165  | 00:02:44 |
| 166                                                               | 00:02:45 | 167      | 00:02:46 | 168   | 00:02:47 | 169   | 00:02:48 | 170  | 00:02:49 |
| 171                                                               | 00:02:50 | 172      | 00:02:51 | 173   | 00:02:52 | 174   | 00:02:53 | 175  | 00:02:54 |
| 176                                                               | 00:02:55 | 177      | 00:02:56 | 178   | 00:02:57 | 179   | 00:02:58 | 180  | 00:02:59 |
| 181                                                               | 00:03:00 | 182      | 00:03:01 | 183   | 00:03:02 | 184   | 00:03:03 | 185  | 00:03:04 |
| 186                                                               | 00:03:05 | 187      | 00:03:06 | 188   | 00:03:07 | 189   | 00:03:08 | 190  | 00:03:09 |
| 191                                                               | 00:03:10 | 192      | 00:03:11 | 193   | 00:03:12 | 194   | 00:03:13 | 195  | 00:03:14 |
| 196                                                               | 00:03:15 | 197      | 00:03:16 | 198   | 00:03:17 | 199   | 00:03:18 | 200  | 00:03:19 |
| 201                                                               | 00:03:20 | 202      | 00:03:21 | 203   | 00:03:22 | 204   | 00:03:23 | 205  | 00:03:24 |
| 206                                                               | 00:03:25 | 207      | 00:03:26 | 208   | 00:03:27 | 209   | 00:03:28 | 210  | 00:03:29 |
| 211                                                               | 00:03:30 | 212      | 00:03:31 | 213   | 00:03:32 | 214   | 00:03:33 | 215  | 00:03:34 |
| 216                                                               | 00:03:35 | 217      | 00:03:36 | 218   | 00:03:37 | 219   | 00:03:38 | 220  | 00:03:39 |
| 221                                                               | 00:03:40 | 222      | 00:03:41 | 223   | 00:03:42 | 224   | 00:03:43 | 225  | 00:03:44 |
| 226                                                               | 00:03:45 | 227      | 00:03:46 | 228   | 00:03:47 | 229   | 00:03:48 | 230  | 00:03:49 |
| 231                                                               | 00:03:50 | 232      | 00:03:51 | 233   | 00:03:52 | 234   | 00:03:53 | 235  | 00:03:54 |
| 236                                                               | 00:03:55 | 237      | 00:03:56 | 238   | 00:03:57 | 239   | 00:03:58 | 240  | 00:03:59 |
| 241                                                               | 00:04:00 | 242      | 00:04:01 | 243   | 00:04:02 | 244   | 00:04:03 | 245  | 00:04:04 |
| 246                                                               | 00:04:05 | 247      | 00:04:06 | 248   | 00:04:07 | 249   | 00:04:08 | 250  | 00:04:09 |
| 251                                                               | 00:04:10 | 252      | 00:04:11 | 253   | 00:04:12 | 254   | 00:04:13 | 255  | 00:04:14 |
| 256                                                               | 00:04:15 | 257      | 00:04:16 | 258   | 00:04:17 | 259   | 00:04:18 | 260  | 00:04:19 |
| 261                                                               | 00:04:20 | 262      | 00:04:21 | 263   | 00:04:22 | 264   | 00:04:23 | 265  | 00:04:24 |
| 266                                                               | 00:04:25 | 267      | 00:04:26 | 268   | 00:04:27 | 269   | 00:04:28 | 270  | 00:04:29 |
| 271                                                               | 00:04:30 | 272      | 00:04:31 | 273   | 00:04:32 | 274   | 00:04:33 | 275  | 00:04:34 |
| 276                                                               | 00:04:35 | 277      | 00:04:36 | 278   | 00:04:37 | 279   | 00:04:38 | 280  | 00:04:39 |
| 281                                                               | 00:04:40 | 282      | 00:04:41 | 283   | 00:04:42 | 284   | 00:04:43 | 285  | 00:04:44 |
| 286                                                               | 00:04:45 | 287      | 00:04:46 | 288   | 00:04:47 | 289   | 00:04:48 | 290  | 00:04:49 |
| 291                                                               | 00:04:50 | 292      | 00:04:51 | 293   | 00:04:52 | 294   | 00:04:53 | 295  | 00:04:54 |
| 296                                                               | 00:04:55 | 297      | 00:04:56 | 298   | 00:04:57 | 299   | 00:04:58 | 300  | 00:04:59 |
| 301                                                               | 00:05:00 | 302      | 00:05:01 | 303   | 00:05:02 | 304   | 00:05:03 | 305  | 00:05:04 |
| 306                                                               | 00:05:05 | 307      | 00:05:06 | 308   | 00:05:07 | 309   | 00:05:08 | 310  | 00:05:09 |
| 311                                                               | 00:05:10 | 312      | 00:05:11 | 313   | 00:05:12 | 314   | 00:05:13 | 315  | 00:05:14 |
| 316                                                               | 00:05:15 | 317      | 00:05:16 | 318   | 00:05:17 | 319   | 00:05:18 | 320  | 00:05:19 |
| 321                                                               | 00:05:20 | 322      | 00:05:21 | 323   | 00:05:22 | 324   | 00:05:23 | 325  | 00:05:24 |
| 326                                                               | 00:05:25 | 327      | 00:05:26 | 328   | 00:05:27 | 329   | 00:05:28 | 330  | 00:05:29 |
| 331                                                               | 00:05:30 | 332      | 00:05:31 | 333   | 00:05:32 | 334   | 00:05:33 | 335  | 00:05:34 |
| 336                                                               | 00:05:35 | 337      | 00:05:36 | 338   | 00:05:37 | 339   | 00:05:38 | 340  | 00:05:39 |
| 341                                                               | 00:05:40 | 342      | 00:05:41 | 343   | 00:05:42 | 344   | 00:05:43 | 345  | 00:05:44 |
| 346                                                               | 00:05:45 | 347      | 00:05:46 | 348   | 00:05:47 | 349   | 00:05:48 | 350  | 00:05:49 |
| 351                                                               | 00:05:50 | 352      | 00:05:51 | 353   | 00:05:52 | 354   | 00:05:53 | 355  | 00:05:54 |
| 356                                                               | 00:05:55 | 357      | 00:05:56 | 358   | 00:05:57 | 359   | 00:05:58 | 360  | 00:05:59 |
| 361                                                               | 00:06:00 | 362      | 00:06:01 | 363   | 00:06:02 | 364   | 00:06:03 | 365  | 00:06:04 |
| 366                                                               | 00:06:05 | 367      | 00:06:06 | 368   | 00:06:07 | 369   | 00:06:08 | 370  | 00:06:09 |
| 371                                                               | 00:06:10 | 372      | 00:06:11 | 373   | 00:06:12 | 374   | 00:06:13 | 375  | 00:06:14 |
| 376                                                               | 00:06:15 | 377      | 00:06:16 | 378   | 00:06:17 | 379   | 00:06:18 | 380  | 00:06:19 |
| 381                                                               | 00:06:20 | 382      | 00:06:21 | 383   | 00:06:22 | 384   | 00:06:23 | 385  | 00:06:24 |
| 386                                                               | 00:06:25 | 387      | 00:06:26 | 388   | 00:06:27 | 389   | 00:06:28 | 390  | 00:06:29 |
| 391                                                               | 00:06:30 | 392      | 00:06:31 | 393   | 00:06:32 | 394   | 00:06:33 | 395  | 00:06:34 |
| 396                                                               | 00:06:35 | 397      | 00:06:36 | 398   | 00:06:37 | 399   | 00:06:38 | 400  | 00:06:39 |
| 401                                                               | 00:06:40 | 402      | 00:06:41 | 403   | 00:06:42 | 404   | 00:06:43 | 405  | 00:06:44 |
| 406                                                               | 00:06:45 | 407      | 00:06:46 | 408   | 00:06:47 | 409   | 00:06:48 | 410  | 00:06:49 |
| 411                                                               | 00:06:50 | 412      | 00:06:51 | 413   | 00:06:52 | 414   | 00:06:53 | 415  | 00:06:54 |
| 416                                                               | 00:06:55 | 417      | 00:06:56 | 418   | 00:06:57 | 419   | 00:06:58 | 420  | 00:06:59 |
| 421                                                               | 00:07:00 | 422      | 00:07:01 | 423   | 00:07:02 | 424   | 00:07:03 | 425  | 00:07:04 |
| 426                                                               | 00:07:05 | 427      | 00:07:06 | 428   | 00:07:07 | 429   | 00:07:08 | 430  | 00:07:09 |
| 431                                                               | 00:07:10 | 432      | 00:07:11 | 433   | 00:07:12 | 434   | 00:07:13 | 435  | 00:07:14 |
| 436                                                               | 00:07:15 | 437      | 00:07:16 | 438   | 00:07:17 | 439   | 00:07:18 | 440  | 00:07:19 |
| 441                                                               | 00:07:20 | 442      | 00:07:21 | 443   | 00:07:22 | 444   | 00:07:23 | 445  | 00:07:24 |
| 446                                                               | 00:07:25 | 447      | 00:07:26 | 448   | 00:07:27 | 449   | 00:07:28 | 450  | 00:07:29 |
| 451                                                               | 00:07:30 | 452      | 00:07:31 | 453   | 00:07:32 | 454   | 00:07:33 | 455  | 00:07:34 |
| 456                                                               | 00:07:35 | 457      | 00:07:36 | 458   | 00:07:37 | 459   | 00:07:38 | 460  | 00:07:39 |
| 461                                                               | 00:07:40 | 462      | 00:07:41 | 463   | 00:07:42 | 464   | 00:07:43 | 465  | 00:07:44 |
| 466                                                               | 00:07:45 | 467      | 00:07:46 | 468   | 00:07:47 | 469   | 00:07:48 | 470  | 00:07:49 |
| 471                                                               | 00:07:50 | 472      | 00:07:51 | 473   | 00:07:52 | 474   | 00:07:53 | 475  | 00:07:54 |
| 476                                                               | 00:07:55 | 477      | 00:07:56 | 478   | 00:07:57 | 479   | 00:07:58 | 480  | 00:07:59 |
| 481                                                               | 00:08:00 | 482      | 00:08:01 | 483   | 00:08:02 | 484   | 00:08:03 | 485  | 00:08:04 |
| 486                                                               | 00:08:05 | 487      | 00:08:06 | 488   | 00:08:07 | 489   | 00:08:08 | 490  | 00:08:09 |
| 491                                                               | 00:08:10 | 492      | 00:08:11 | 493   | 00:08:12 | 494   | 00:08:13 | 495  | 00:08:14 |
| 496                                                               | 00:08:15 | 497      | 00:08:16 | 498   | 00:08:17 | 499   | 00:08:18 | 500  | 00:08:19 |
| 501                                                               | 00:08:20 | 502      | 00:08:21 | 503   | 00:08:22 | 504   | 00:08:23 | 505  | 00:08:24 |
| 506                                                               | 00:08:25 | 507      | 00:08:26 | 508   | 00:08:27 | 509   | 00:08:28 | 510  | 00:08:29 |
| 511                                                               | 00:08:30 | 512      | 00:08:31 | 513   | 00:08:32 | 514   | 00:08:33 | 515  | 00:08:34 |
| 516                                                               | 00:08:35 | 517      | 00:08:36 | 518   | 00:08:37 | 519   | 00:08:38 | 520  | 00:08:39 |
| 521                                                               | 00:08:40 | 522      | 00:08:41 | 523   | 00:08:42 | 524   | 00:08:43 | 525  | 00:08:44 |
| 526                                                               | 00:08:45 | 527      | 00:08:46 | 528   | 00:08:47 | 529   | 00:08:48 | 530  | 00:08:49 |
| 531                                                               | 00:08:50 | 532      | 00:08:51 | 533   | 00:08:52 | 534   | 00:08:53 | 535  | 00:08:54 |
| 536                                                               | 00:08:55 | 537      | 00:08:56 | 538   | 00:08:57 | 539   | 00:08:58 | 540  | 00:08:59 |
| 541                                                               | 00:09:00 | 542      | 00:09:01 | 543   | 00:09:02 | 544   | 00:09:03 | 545  | 00:09:04 |
| 546                                                               | 00:09:05 | 547      | 00:09:06 | 548   | 00:09:07 | 549   | 00:09:08 | 550  | 00:09:09 |
| 551                                                               | 00:09:10 | 552      | 00:09:11 | 553   | 00:09:12 | 554   | 00:09:13 | 555  | 00:09:14 |
| 556                                                               | 00:09:15 | 557      | 00:09:16 | 558   | 00:09:17 | 559   | 00:09:18 | 560  | 00:09:19 |
| 561                                                               | 00:09:20 | 562      |          |       |          |       |          |      |          |

Motion Check function

This function allows you to perform a motion check according to the timings and cel stacking indicated in the X-sheet.



Frame-by-frame advance using the Arrow key

Click the arrow key to advance the images frame-by-frame.



Advances the images by one frame at a time unconditionally.



Frame 48



Frame 49



Frame 50



Frame 51



Advances the images by frames, skipping those without any changes.



Frame 48



Click the key to skip frames without motion.



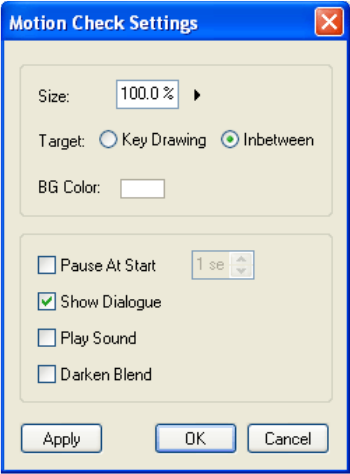
Frame 51

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Configuring a Motion Check

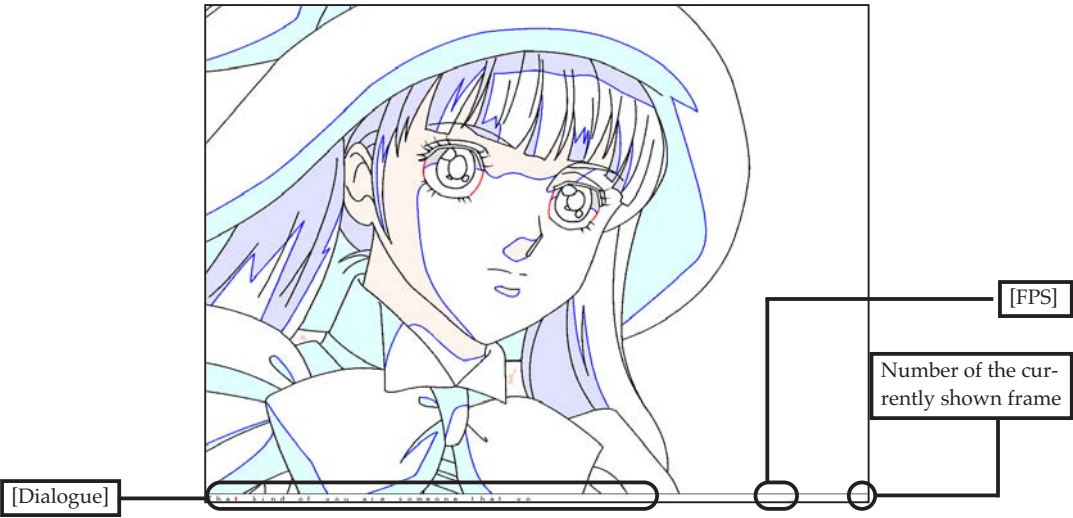
Select [Motion Check] → [Settings...] from the [X-Sheet] menu. The Motion Check Settings dialog box appears. Configure the Motion Check settings.



- **[Size]**  
Specify the size in which the images will be shown.
  - **[Target]**  
Select whether the images to show will be [Key Drawing] or [Inbetween] using the radio buttons.
  - **[BG Color]**  
Click the [Foreground Color] button to open the Color Settings panel. The color selected there will be used as the BG color for the images to be shown.
- \* The following items are items enabled by selecting the corresponding check box.
- **[Pause At Start]**  
Select this check box to set the number of seconds to wait before starting the Motion Check.
  - **[Show Dialogue]**  
Shows the dialogue in the [Dialogue] column at the lower left of the screen according to the X-sheet settings.
  - **[Play Sound]**  
Plays the sound data registered in the [Sound] column.
  - **[Darken Blend]**  
Compares the pixels of the two layers to composite and composites with the darker one.
- 
- **[Apply]**  
Executes the Motion Check.
  - **[OK]**  
Confirms the settings which will be reflected on the Motion Check to execute.
  - **[Cancel]**  
Cancels the settings and closes the dialog.

Executing a Motion Check

To execute the Motion Check, click the [Motion Check] button on the X-sheet or select [Motion Check] → [Apply] from the [X-sheet] menu.



- **[Dialogue]**  
The text in the [Dialogue] column are shown according to the X-sheet timing.
- **[FPS]**  
Indicates the FPS (actual value) of the images being played. The FPS is not shown during pauses.
- **[Current Frame Number]**  
Indicates the number of the frame currently shown on the screen. This indication is convenient for checking the current frame number at a pause or at a motion check by the frame.

Adjusting the playback speed from the keyboard

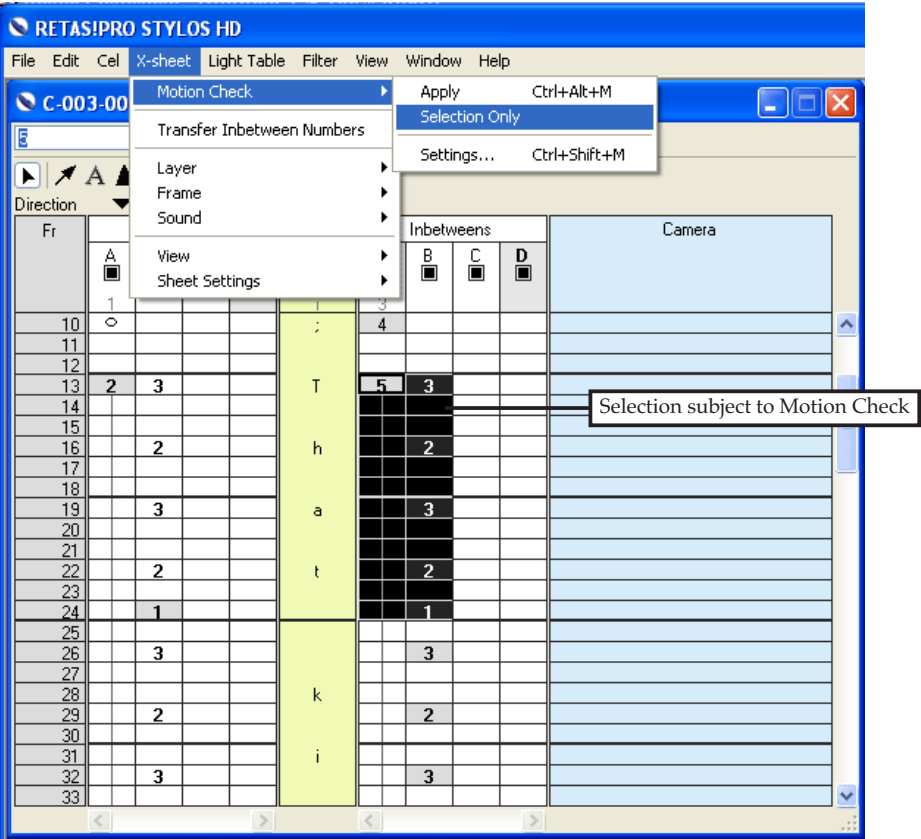
The following keyboard operations are available during a Motion Check.

- |                                                                                  |                                               |
|----------------------------------------------------------------------------------|-----------------------------------------------|
| • <b>[Space]</b> Pause and Play                                                  | Changes the playback FPS.                     |
| • <b>[Esc]</b> Stop                                                              | • <b>[1]</b> 30 fix                           |
| • <b>[Left]</b> Show previous frame                                              | • <b>[2]</b> 25 fix                           |
| • <b>[Right]</b> Show next frame                                                 | • <b>[3]</b> 24 fix                           |
| These keyboard operations are for playing according to the X-sheet by the frame. | • <b>[4]</b> 12 fix                           |
|                                                                                  | • <b>[5]</b> 10 fix                           |
|                                                                                  | • <b>[6]</b> 8 fix                            |
|                                                                                  | • <b>[7]</b> According to the X-sheet setting |
- 
- **[Up]** Show previous frame with a difference in the image
  - **[Down]** Show next frame with a difference in the image
- These keyboard operations are useful for checking an X-sheet with few changes in the images as when a Step in 3's is used.

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Executing a Motion Check for a selected part

Select the part of the X-sheet you want to check. Select [Motion Check] → [Selection Only] from the [X-sheet] menu. The Motion Check is executed only for the selected part.



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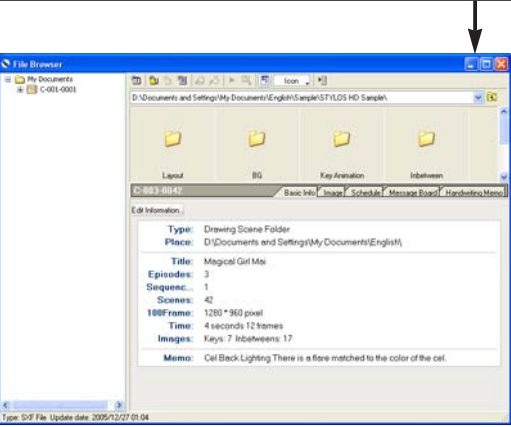
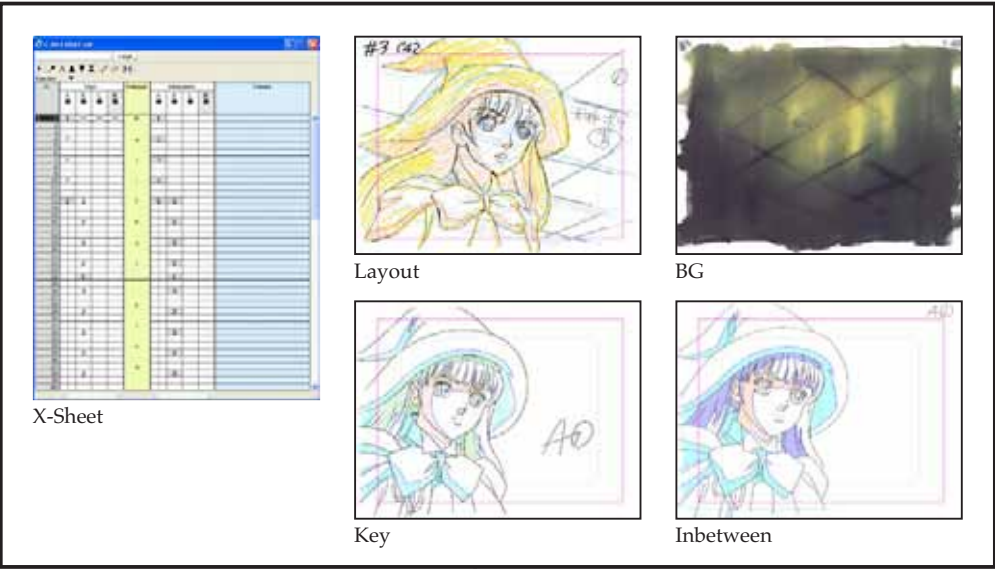


# File Browser

## What is a File Browser?

The [File Browser] is a GUI that allows you to browse the materials contained in a scene folder as well as manage the processing of files and folders.

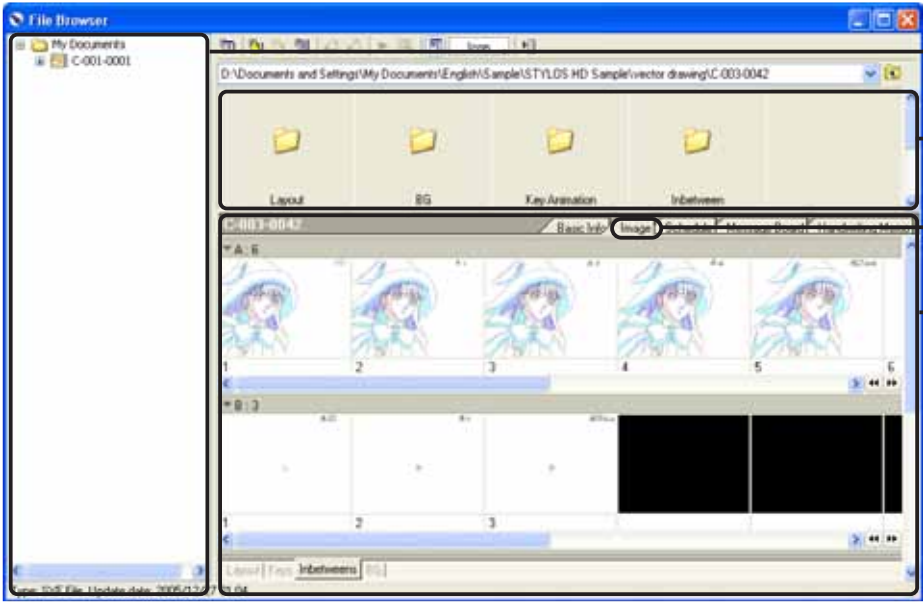
It also allows you to register various information such as progress history, directions, and messages in the folder (traditionally written directly on the cover of the conventional scene folder or attached as separate memos) as well as browse them. Digitization of the directions and their inclusion to the [Scene Folder] realizes a completely paperless working environment as there is no more need to have the directions written on paper and convey them separately. With this system, directions can be conveyed by just sending the scene folder.



File Browser

## Name of the file browser parts

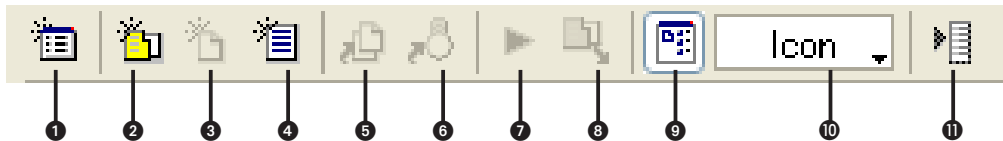
The file browser opens when you select [File Browser] from the [Window] menu.



- 1 Tree View**  
Shows the directory structure and the location of the scene folder in tree format.
- 2 File View**  
Shows the files under the folder selected in the tree view.
- 3 Info View**  
Area where the information in the [Basic Info], [Image], [Schedule], [Message Board], and [Handwriting Memo] tabs of the scene folder selected in the tree view is shown. Select the corresponding tab to switch the information shown.
- 4 Cel Bank**  
[Cel Bank] is the name given to the view area of the [Image] tab under Info View, and is the area for showing images in the [Layout], [Keys], [Inbetweens], and [BG] folders.

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Name of the file browser buttons



- 1 [Edit Browser Folder] button**  
This button allows you to edit the scene folder location to browse from the [File Browser].
- 2 [New Scene Folder...] button**  
This button allows you to create a new scene folder.
- 3 [New Cel...] button**  
This button allows you to create a new drawing paper when a blank [Cel Bank] column is selected.
- 4 [New X-sheet...] button**  
This button allows you to create a new X-sheet for the selected scene folder.
- 5 [Load...] button**  
This button allows you to load an image file to a blank [Cel Bank] column.
- 6 [Load to Light Table] button (Only STYLOS HD/PaintMan HD)**  
This button allows you to load a layout, key, inbetween, and/or BG to the light table from the [Cel Bank]. (Make sure you have switched the light table set to a set without any image in it by using the [Switch Light Table Set] button on the [Light Table Palette] in advance.)
- 7 [Motion Check...] button**  
This button opens the [Motion Check Settings] dialog box. Clicking [OK] after configuring the settings starts the Motion Check. (Same as [Motion Check...] under the [View] menu.)
- 8 [Export Painting...] button (STYLOS HD)**  
This button allows you to convert the selected scene folder for drawings or images into a scene folder or images suitable for painting.
- [Export Raster...] button (Only TraceMan HD/PaintMan HD)**  
This button allows you to convert the images in the selected scene folder into raster images of a different format.
- 9 [Show/Hide Tree View] button**  
This button allows you to toggle between show and hide tree view at every click.
- 10 [File View Switch]**  
This switch allows you to select the way to show the File View from among [Icon], [Details], and [List].
- 11 [Show Menu] button**  
This button allows you to open the file browser menu.

Editing the browser folder

The procedure for registering the location where the scene folder is stored for you to be able to search and manage the scene folders using the file browser is as follows.

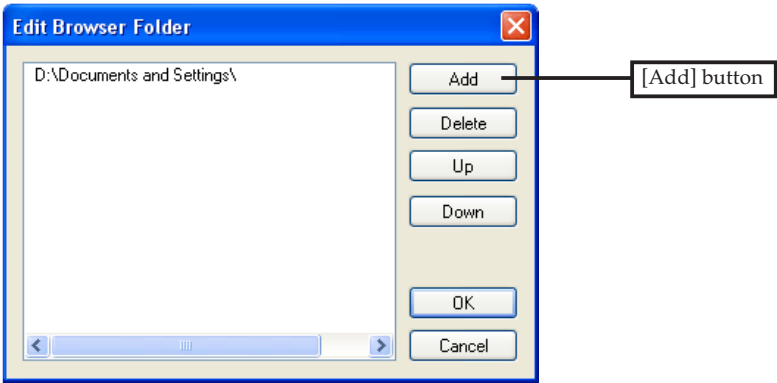
1. Select the Edit Browser Folder button.

Click [Edit Browser Folder] on the [File Browser].



2. Open the [Edit Browser Folder] dialog box.

Click [Add] on the opened [Edit Browser Folder] dialog box.

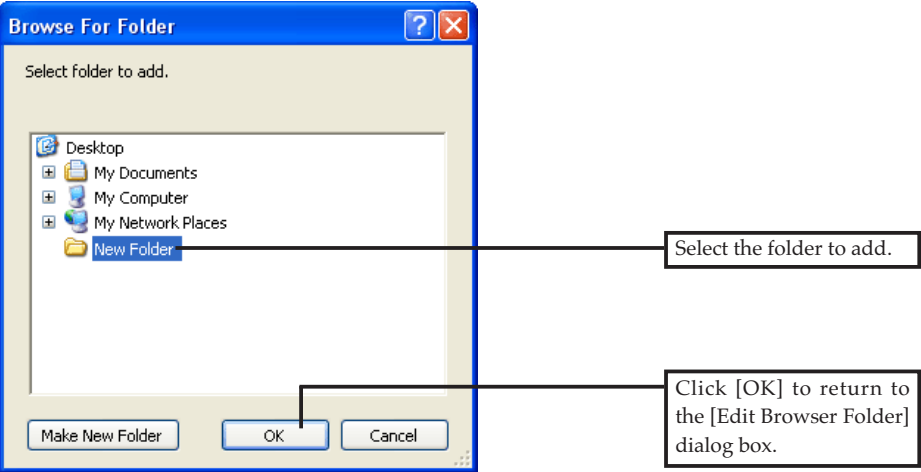


- [Add] button**  
Clicking this button opens the [Browse Folder] dialog box.
- [Delete] button**  
Clicking this button when an entry is selected in the list at the left (enclosed in blue frame), deletes the entry.
- [Up]/[Down] button**  
Clicking the [Up]/[Down] button when an entry is selected in the list at the left (enclosed in blue frame), moves the entry up/down changing its order in the list.
- [OK] button**  
Confirms the settings and closes the dialog box.
- [Cancel] button**  
Cancels the settings and closes the dialog box.

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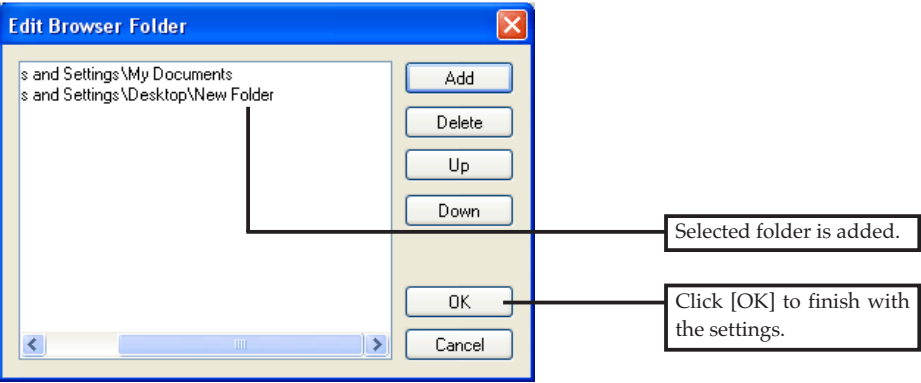
3. Select the folder to add.

Select the folder to add in the [Edit Browser Folder] dialog box from the list shown in the [Browse Folder] dialog box.



4. Completion

When the screen returns to the [Edit Browser Folder] dialog box, the selected folder is shown there.

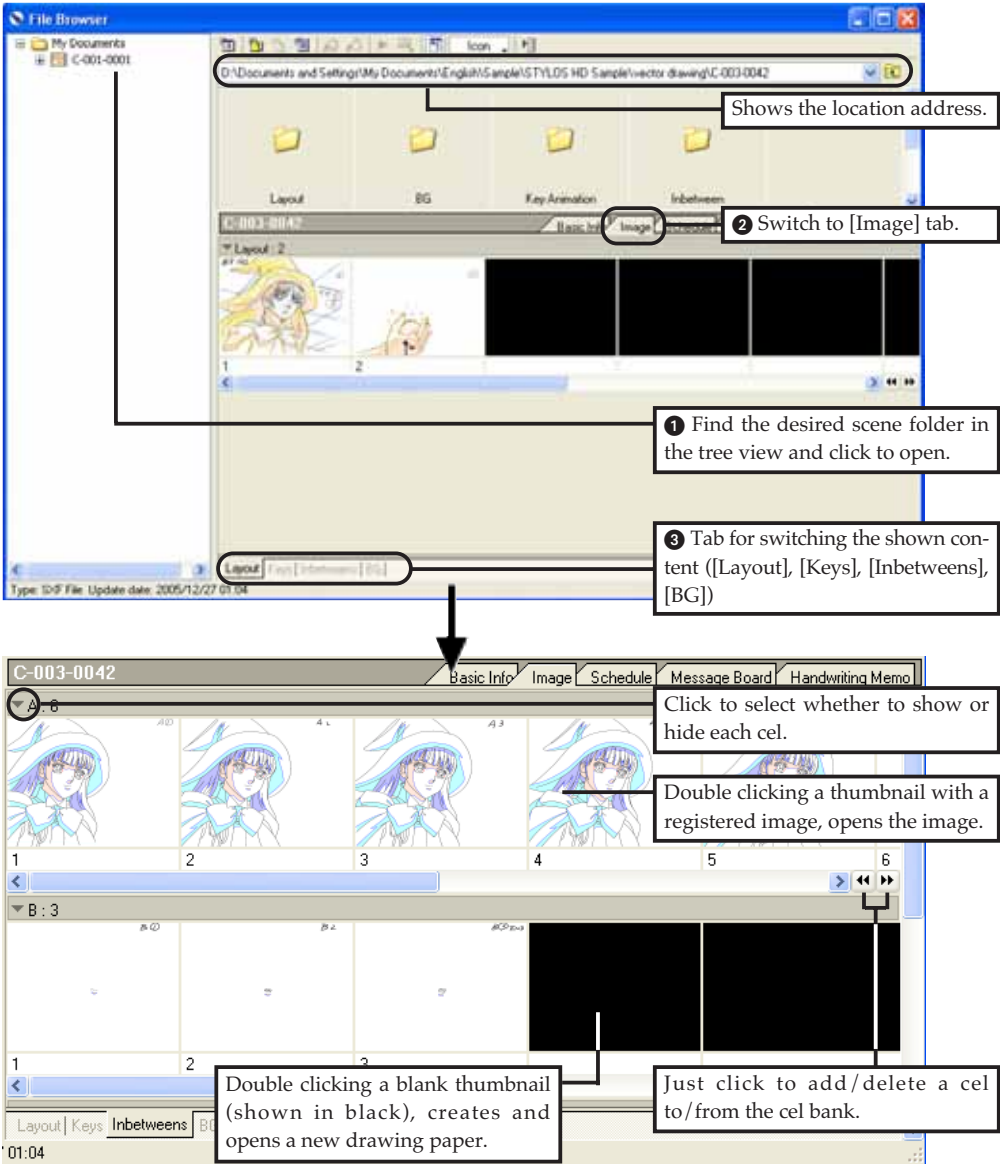


Tips

Another way to open the [Edit Browser Folder] dialog box is to click [Show Menu] in the [File Browser] and select [Edit Browser Folder].

Browsing images (Cel Bank)

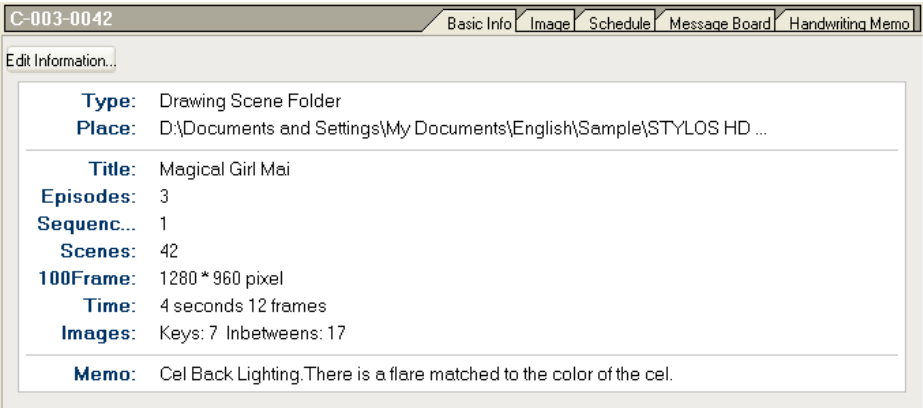
To view the image of drawings of the different processes in the [Cel Bank], open the desired scene folder and switch to the [Image] tab.



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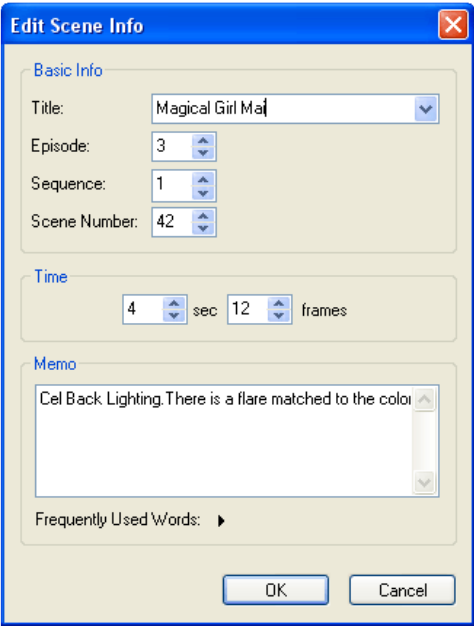
Browsing the basic information

To view the basic information (the information traditionally written on the cover of the conventional scene folder), select the [Basic Info] tab in the [File Browser] Info View area.



[Edit Information...] button

This button allows you to open [Edit Scene Info] dialog box and edit the [Title], [Episode], [Sequence], [Scene Number], [Time], and/or [Memo].

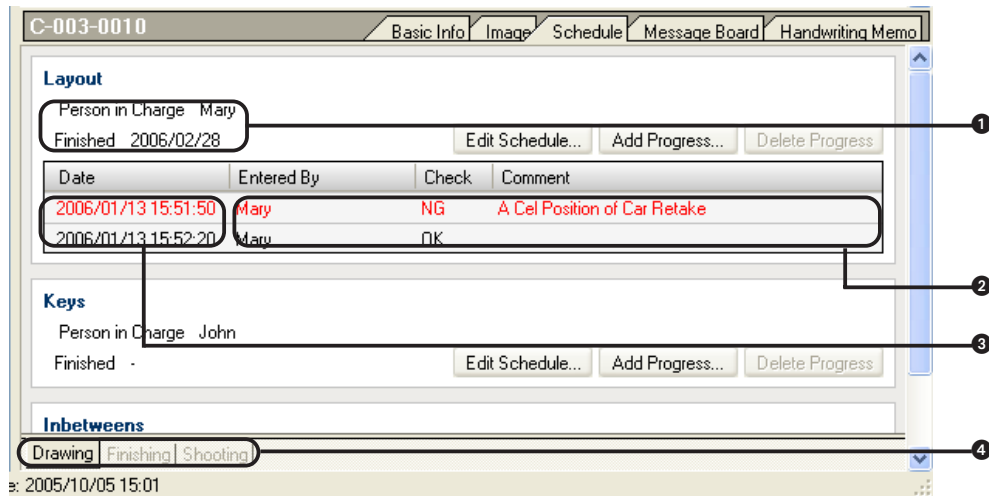


- **[Type]**  
Shows the folder type.
- **[Location]**  
Shows the scene folder location.
- **[Title]**  
Shows the loaded title.
- **[Episodes]**  
Shows the loaded number of episodes.
- **[Sequence]**  
Shows the loaded sequence number.
- **[Scene]**  
Shows the loaded scene number.
- **[100Frame]**  
Shows the 100Frame size.
- **[Time]**  
Shows the scene duration in seconds + number of frames.
- **[Images]**  
Shows the number of keys and inbetweens.
- **[Memo]**  
Shows the memos written at the time of the scene folder creation.

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Browsing the schedule

The schedule progress information such as the person in charge, the finished date, etc. can be registered from the [File Browser] Info View area using the [Schedule] tab.



- 1 **Schedule Info**  
Shows the name of the person in charge and the finished date of each process.
- 2 **Progress Info**  
Shows the progress status, check result and comments, and the name of the person that made the entry.
- 3 **Progress entry date**  
Shows the date and time the progress status was checked and comments entered.
- 4 **Process tab**  
Switches the process for which you want to edit or view the information.
  - **[Drawing] tab**  
Shows the schedule for the layout, key, and inbetween drawing processes.
  - **[Painting] tab**  
Shows the schedule for the color styling, painting, and effects processes.
  - **[Shooting] tab**  
Shows the schedule for BG, materials check, and shooting processes.

[Edit Schedule...] button

Clicking this button opens the [Schedule Info] dialog box that allows you to enter the name of the person in charge and the finished date.



- **[Name]**  
A previously entered name can be selected from a list that is shown when you click the button at the right. This list includes the names entered in the [Progress Status] dialog box [Name] field.
- **[Finished]**  
To enter a date, select the check box.  
To change the shown date, click the digits you want to change.
- **[OK] button**  
Confirms the settings and closes the dialog box.
- **[Cancel] button**  
Cancels the settings and closes the dialog box.

[Add Progress...] button

Clicking this button opens the [Progress Status] dialog box that allows you to enter the name of the person in charge of the checking, the check result, and comments.



- **[Name]**  
A previously entered name can be selected from a list that is shown when you click the button at the right. This list includes the names entered in the [Schedule Info] dialog box [Name] field.
- **[Check]**  
Select an option from among [-], [OK], and [NG].  
Selecting [NG] shows the corresponding progress information in red.
- **[Comment]**  
Enter a message using text as required.
- **[OK] button**  
Confirms the settings and closes the dialog box.
- **[Cancel] button**  
Cancels the settings and closes the dialog box.

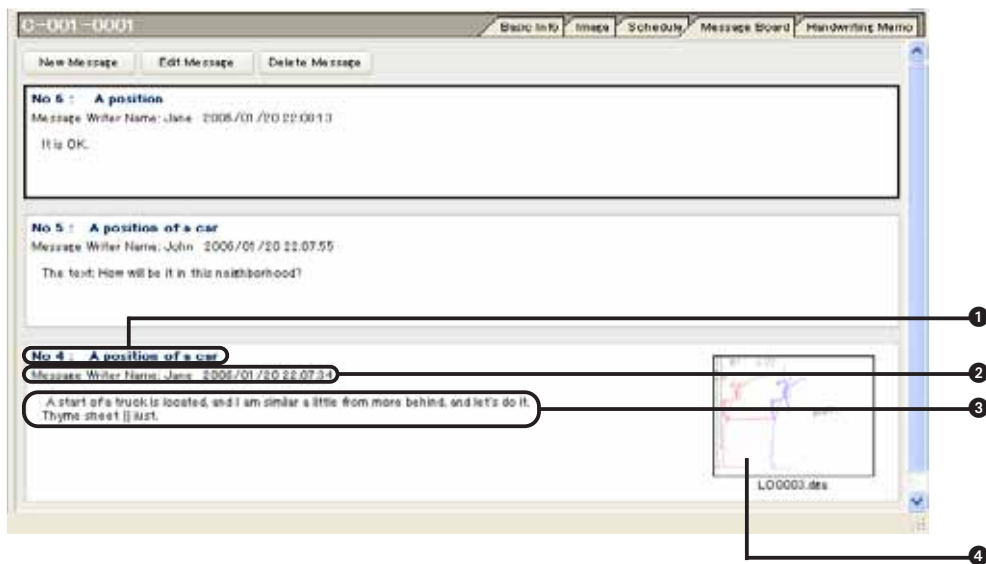
[Delete Progress] button

To delete an unnecessary progress information from the schedule, click the progress information you want to delete to select, then click [Delete Progress].



Browsing the Message Board

Messages related to the schedule can be entered from the [File Browser] Info View area using the [Message Board] tab.



- 1 **Subject**  
Shows the message number and the subject.
- 2 **Name**  
Shows the name of the person that entered the message and the date and time the message was entered.
- 3 **Message**  
Shows the content.
- 4 **Link file**  
Link to an image file. Click the thumbnail to open the image.

[New Message] button

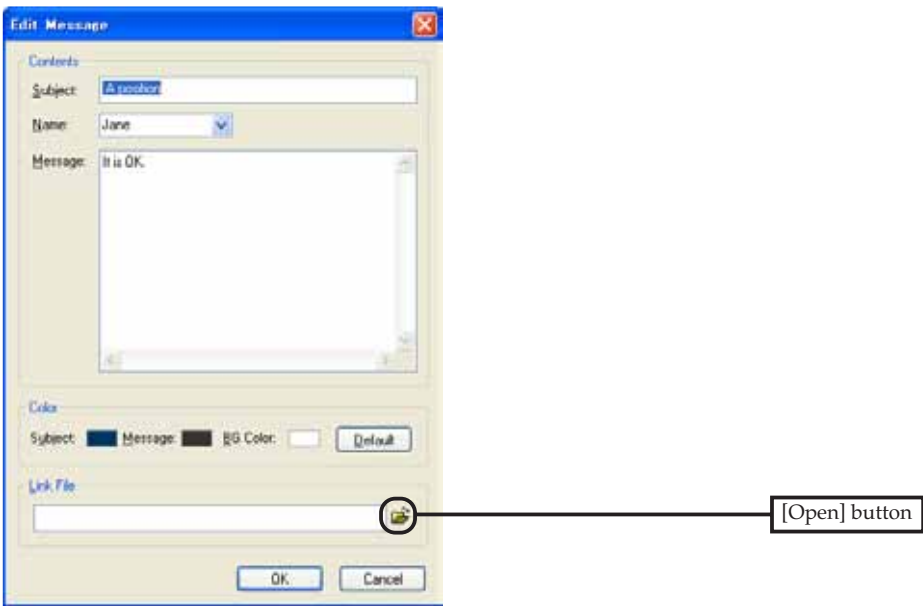
Opens the [Edit Message] dialog box that allows you to enter a new message.

[Edit Message] button

Click the message to edit to select. Then click the [Edit Message] button to open the [Edit Message] dialog box that allows you to change the message content.

[Delete Message] button

Select the message you want to delete and click [Delete Message]. A confirmation dialog box appears. Click [OK] to confirm the deletion.



- **[Contents]**  
Comprises the [Subject], [Name], and [Message] fields. You will not be able to register the message if any of the fields is left blank.  
The [Name] list of this dialog box is linked to the [Name] lists of persons in charge of a process or progress check under the [Schedule] tab.
- **[Color]**  
Click the [Subject], [Message], and/or [BG] button to show the Color Palette and select a color for the corresponding field.  
Click [Default] to return to the default settings.
- **[Link File]**  
To attach an image file to the message, click the [Open] button and select the image file.
- **[OK] button**  
Confirms the settings and closes the dialog box.
- **[Cancel] button**  
Cancels the settings and closes the dialog box.

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Browsing the handwriting memo

Texts and/or drawings can be entered in the handwriting memo pages using the graphics tablet pen or the mouse.



1 [Pen] tool

The [Pen] tool allows you to draw lines on a handwriting memo page.  
Double click the [Pen] tool icon. The [Pen Settings] dialog box that allows you to select the pen size and the color appears.



2 [Eraser] tool

The [Eraser] tool allows you to erase a drawn line.  
Double click the [Eraser] tool icon. The [Eraser Settings] dialog box that allows you to select the eraser size in the 1 - 20 range appears.



3 Page

Page is where your handwritten memo will be entered.

4 Page switch

This button allows you to switch the currently shown page to the next, the previous, or the first.

[Clear Page] button

Clears the content of the currently shown page.

[Add Page] button

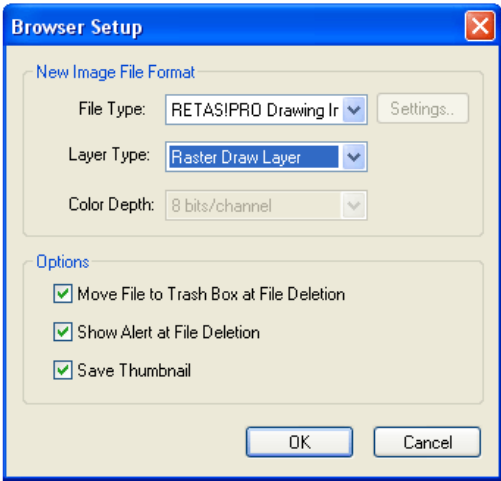
Adds a new page.

[Delete Page] button

Deletes the currently shown page.

Browser Setup dialog box

To open the [Browser Setup] dialog box, click [Show Menu] in the [File Browser] and select [Settings...].



[New Image File Format]

Allows you to select the image file format.

• [Settings...]

Depending on the image file format selected in [File Type], you may configure optional settings such as the compression method.

• [Layer Type]

Allows you to select the layer.

• [Color Depth]

Depending on the image file format selected in [File Type], you may configure the color depth settings.

[Options]

The following items are items enabled by selecting the corresponding check box.

• [Move File to Trash Box at File Deletion]

• [Show Alert at File Deletion]

• [Save Thumbnail]

• [OK] button

Confirms the settings and closes the dialog box.

• [Cancel] button

Cancels the settings and closes the dialog box.



File Browser menu

The following menu is shown when you click the [Show Menu] button.

|                        |        |
|------------------------|--------|
| Edit Browser Folder... |        |
| New                    | ▶      |
| Open                   |        |
| Open in Explorer       |        |
| Cut                    | Ctrl+X |
| Copy                   | Ctrl+C |
| Paste                  | Ctrl+V |
| Delete                 | Delete |
| Export                 | ▶      |
| Cel Folder             |        |
| Renumber Cel           |        |
| Rename                 |        |
| View                   |        |
| Sort                   |        |
| Load...                |        |
| Load to Light Table    |        |
| Page Setup...          |        |
| Motion Check...        | Ctrl+M |
| Settings...            |        |

(STYLOS HD/ Windows version)

|                        |            |
|------------------------|------------|
| Edit Browser Folder... |            |
| New                    | ▶          |
| Open                   |            |
| Open in Explorer       |            |
| Cut                    | Ctrl+X     |
| Copy                   | Ctrl+C     |
| Paste                  | Ctrl+V     |
| Delete                 | Delete     |
| Export                 | ▶          |
| Cel Folder             |            |
| Renumber Cel           |            |
| Rename                 |            |
| View                   |            |
| Sort                   |            |
| Load...                |            |
| Page Setup...          |            |
| Motion Check...        | Ctrl+Alt+M |
| Settings...            |            |

(TraceMan HD/ Windows version)

|                        |        |
|------------------------|--------|
| Edit Browser Folder... |        |
| New                    | ▶      |
| Open                   |        |
| Open in Sub Palette    |        |
| Open in Explorer       |        |
| Cut                    | Ctrl+X |
| Copy                   | Ctrl+C |
| Paste                  | Ctrl+V |
| Delete                 | Delete |
| Export                 | ▶      |
| Cel Folder             |        |
| Renumber Cel           |        |
| Rename                 |        |
| View                   |        |
| Sort                   |        |
| Load...                |        |
| Load to Light Table    |        |
| Page Setup...          |        |
| Motion Check...        | Ctrl+M |
| Settings...            |        |

(PaintMan HD/ Windows version)

- **[Cut]**  
Cuts an image selected in the [File View] [Cel Bank].
- **[Copy]**  
Copies an image selected in the [File View] [Cel Bank].
- **[Paste]**  
Pastes an image selected in the [File View] [Cel Bank].
- **[Delete]**  
Deletes a folder of file selected in the [File View].
- **[Export]**  
Converts the selected scene folder or image into a scene folder or image of a different format. Available options are: [Painting] (only STYLOS HD), [Raster...], and [SWF...].
- **[Cel Folder]**  
Allows you to [Add], [Delete], or [Rename] cel folders.
- **[Renumber Cel]**  
Allows you to change the number of a cel selected in the Cel Bank.
- **[Rename]**  
Allows you to change the name of a folder selected in the Cel Bank.
- **[View]**  
Allows you to select whether to show or hide the [Tree View], or to select the way to show the File View from among [Icon], [Detailed], and [List].
- **[Sort]**  
Allows you to sort the folders in the [File View] according to [Name], [Size], [Type], or [Date Modified].
- **[Load...]**  
Allows you to load an image file to a blank [Cel Bank] column.
- **[Load to Light Table] (Only STYLOS HD/PaintMan HD)**  
Allows you to load a layout, key, inbetween, and/or BG to the light table from the [Cel Bank]. (Make sure you have switched the light table set to a set without any image in it by using the [Switch Light Table Set] button on the [Light Table Palette] in advance.)
- **[Page Setup...]**  
Selecting this item opens the [Page Setup] dialog box which allows you to configure the [Frame Size], [Frame Settings], and/or [Position] for the drawing paper. (You need to have the image selected in the Cel Bank)
- **[Motion Check...]**  
Selecting this item opens the [Motion Check Settings] dialog box. Clicking [OK] in the dialog box after configuring the necessary items starts the motion check.
- **[Settings...]**  
Selecting this item opens the [Browser Setup] dialog box which allows you to specify the image format or layer type at the creation of a new image file or the handling at file deletion.

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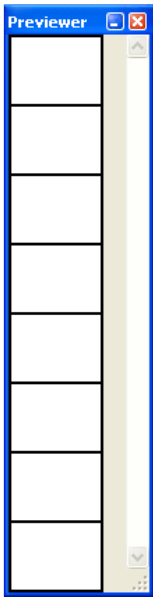
# File Previewer

## Basic operations using File Previewer

The file previewer allows you to check sequentially numbered images within the same layer using thumbnails, or switch the image to edit.

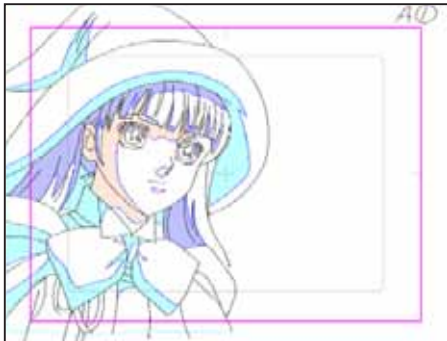
### 1. Opening the File Previewer

To open the [File Previewer], select [File Previewer] from the [Window] menu.



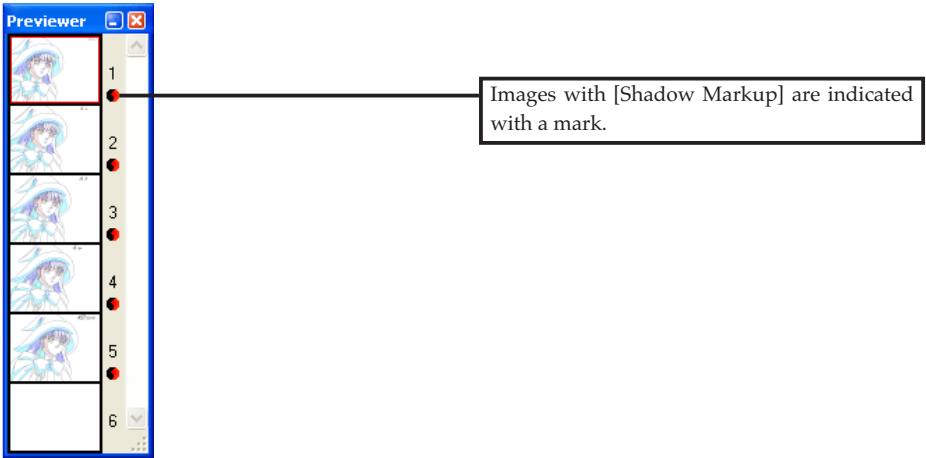
### 2. Opening the Cel window

Double click any thumbnail shown in the [Cel Bank] at the lower part of the [File Browser]. The [Cel] window appears.



### 3. Showing a sequentially numbered image

Sequentially numbered images for the same cel are shown on the [File Previewer] simultaneously. Clicking an image in the [File Previewer] opens a [Cel] window with the image. The image can be edited there.



### 4. Switching the File Previewer orientation

The File Previewer is shown vertically by default. To show it horizontally, take the lower right corner of the File Previewer with the mouse pointer and drag.



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RETAS!PRO

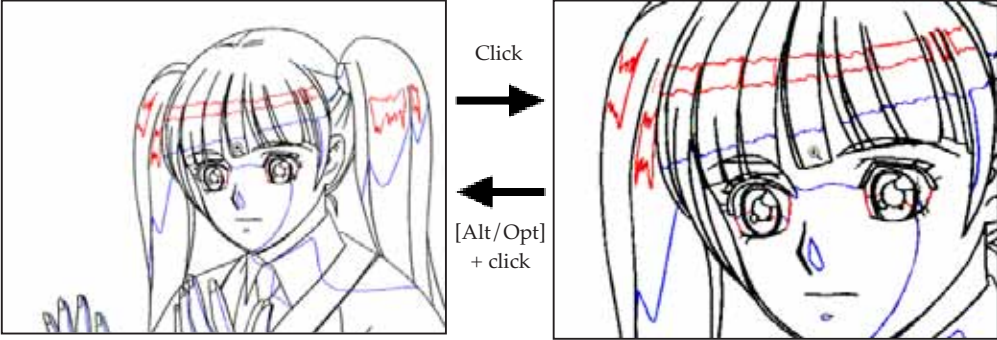
# *Chapter* **5**

## **Screen View**

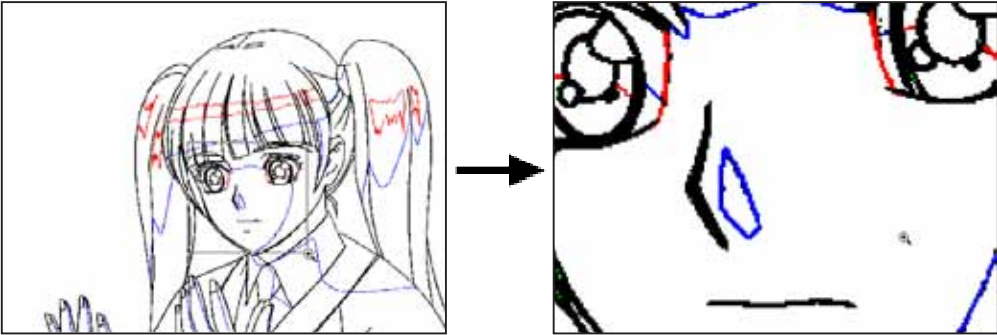
# Screen View

## Zooming In/Zooming Out: Zoom tool

Clicking on a part of the [Cel] window you want to zoom in with the tool selected amplifies the view. If clicked while you have the [Alt/Opt] key held down, reduces the view.

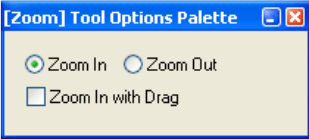


If [Zoom In with Drag] is selected in the [Zoom] tool options palette, you can enlarge by just dragging with the [Zoom] tool the part you want to zoom in for selecting it, then releasing the mouse pointer.



### [Zoom] tool options palette

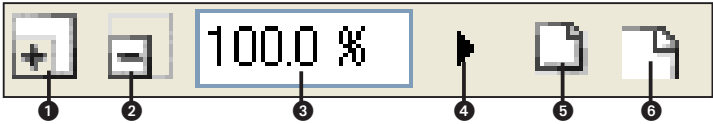
Working with the [Zoom] tool options palette open allows you to toggle the click behavior between [Zoom In] and [Zoom Out] as needed.



## Zooming In/Zooming Out: Tool bar

The [Tool bar] on the upper part of the window allows you to adjust the scale for the screen view. The [Tool bar] can be shown or hidden by selecting/deselecting [Show Tool Bar] under the [View] menu.

[Zoom In], [Zoom Out], [Fit on Screen], [Actual Pixels] are also available through shortcuts using the [Ctrl/Cmd] key as well as from [Scale] under the [View] menu.

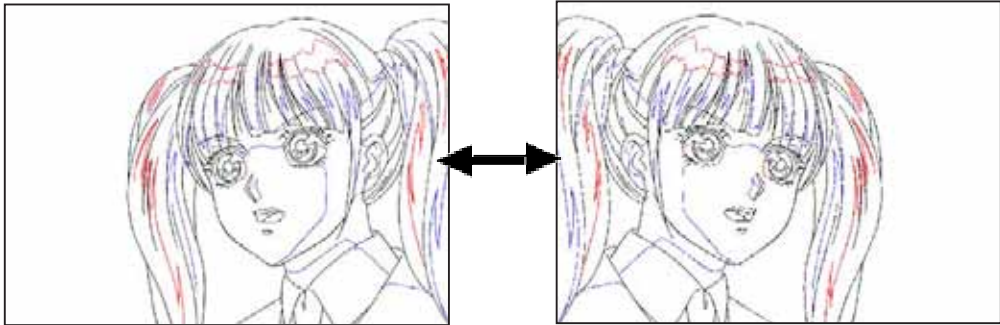


- 1 **[Zoom In]** ([View] → [Scale] → [Zoom In] / [Ctrl/Cmd] + [+])  
The screen view is amplified at every mouse click.
- 2 **[Zoom Out]** ([View] → [Scale] → [Zoom Out] / [Ctrl/Cmd] + [-])  
The screen view is reduced at every mouse click.
- 3 **Scale (Input box)**  
Enter a numeric scale value for the screen view from the keyboard.
- 4 **[Scale] (Slider)**  
Clicking the icon shows a slider. Adjust the scale by dragging up/down the slider. Adjustment is also possible by clicking the slider arrow at the right.
- 5 **[Fit on Screen]** ([View] → [Scale] → [Fit on Screen] / [Ctrl/Cmd] + [0])  
The scale is adjusted so that the whole screen view is shown in the [Cel] window.
- 6 **[Actual Pixels]** ([View] → [Scale] → [Actual Pixels] / [Ctrl/Cmd] + [Shift] +[0])  
In this screen view, the image pixels are matched to screen pixels 1:1.

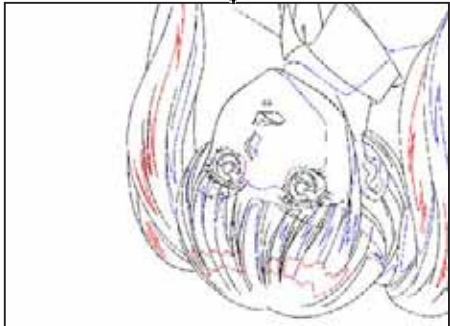
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Reversing the screen view: Tool bar

The [Tool bar] on the upper part of the window allows you to flip the screen view horizontally or vertically. The [Tool bar] can be shown or hidden by selecting/deselecting [Show Tool Bar] under the [View] menu. The same operation is also possible with [Flip Horizontal] and [Flip Vertical] under the [View] menu.



Example of [Flip Horizontal]

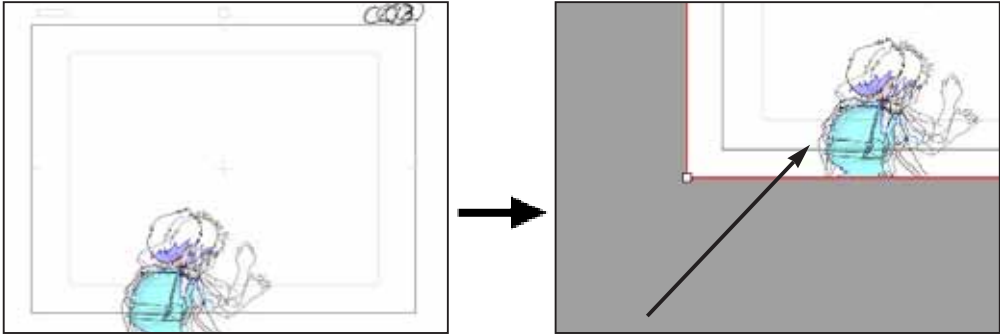


Example of [Flip Vertical]

Moving a screen view: Hand tool



Dragging over the [Cel] window with the tool selected moves the screen view.



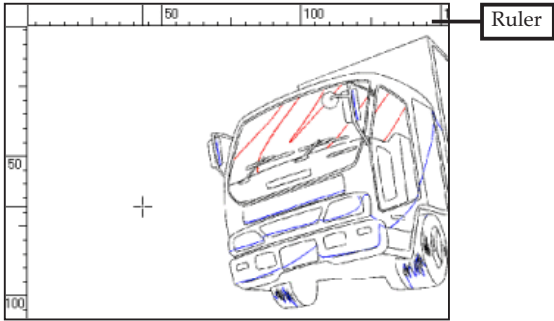
Tips

You can use the [Hand] tool temporarily even when you have another tool selected by holding down the [Ctrl]/[Cmd] key.

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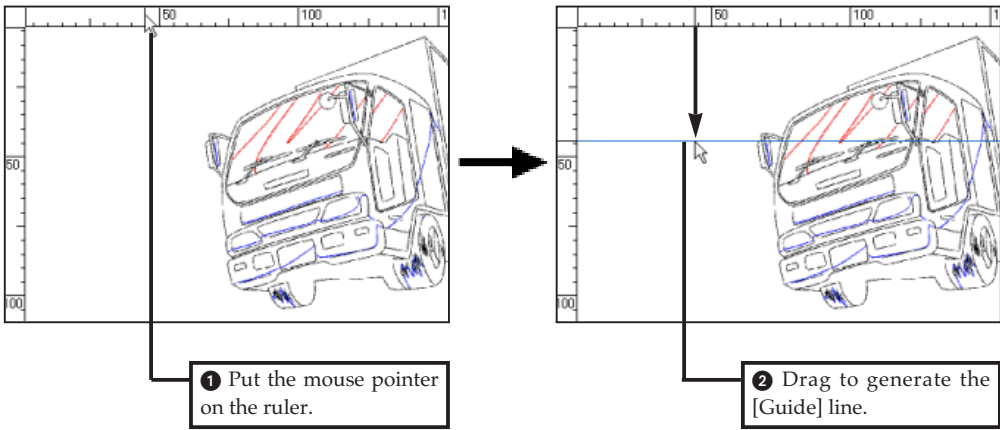
**Showing the ruler**  [View] → [Show Ruler]

Clicking the [Show Ruler] icon on the [Tool] bar shows the ruler in the [Cel] window.



**Showing the guide line**  [View] → [Show Guide]

Clicking the [Show Guide] icon on the [Tool] bar shows the guide lines in the [Cel] window. To generate a [Guide] line, put the mouse pointer on the ruler and drag.

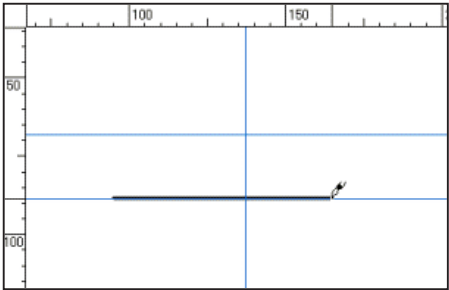


**Tips**

To delete a guide line, drag it outside the [Cel] window.

**Snap to Guide**  [Edit] → [Snap] → [Guide]

Clicking the [Snap to Guide] icon on the [Tool] bar allows you to draw a straight line snapped to the [Guide] line.

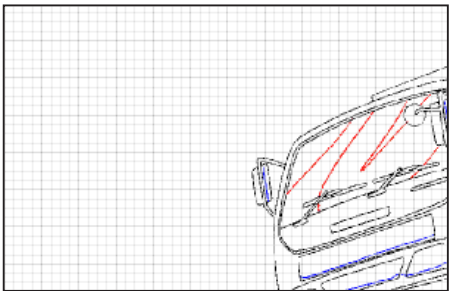


**Object Selection Tool**  

To move a [Guide] line, select the line with the [Object Selection] tool on the [Tool Palette] and drag.

**Show Grid**  [View] → [Show Grid]

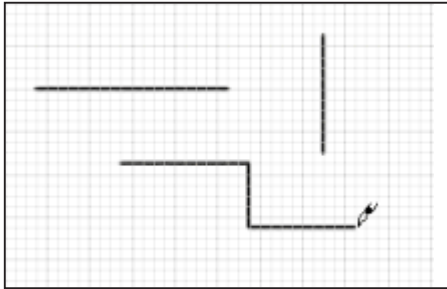
Clicking the [Show Grid] icon on the [Tool] bar shows the [Cel] window with grid lines.





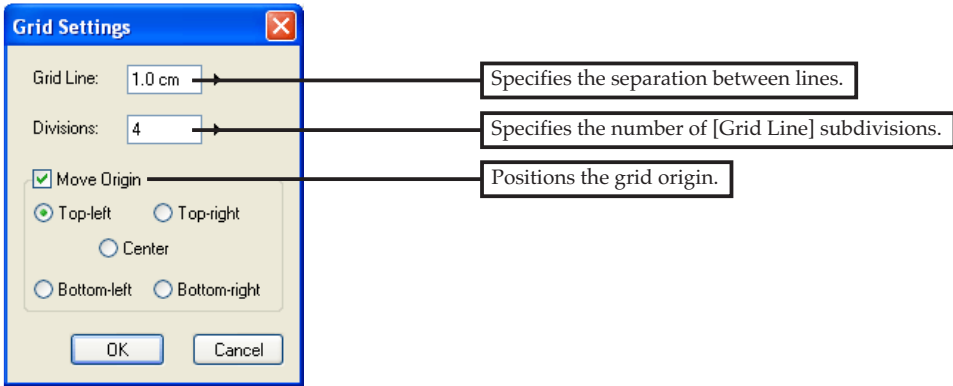
**Snap to Grid**  [Edit] → [Snap] → [Grid]

Clicking the [Snap to Grid] icon on the [Tool] bar allows you to draw straight lines snapped to a shown [Grid] or [Grid Subdivision] line.



**[Grid Settings] dialog box**

Selecting [Settings] → [Grid...] from the [Edit] menu opens the [Grid Settings] dialog box that allows you to configure the detailed settings.

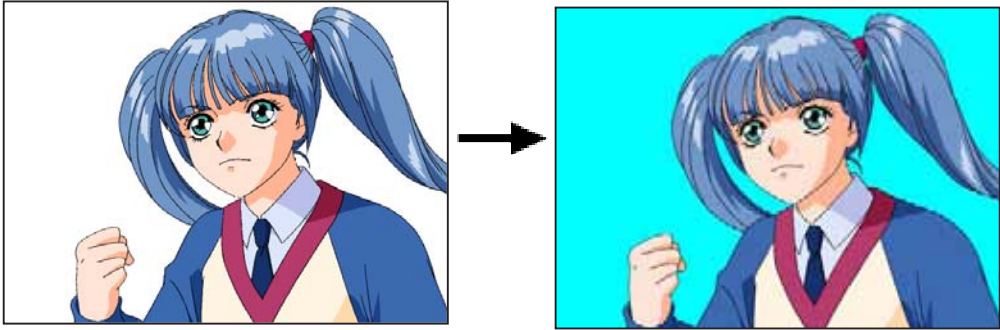


**Tips**

[Grid Lines] are not always shown as specified because depending on the scale, they are thinned out. You can change the [Grid] line settings by selecting [Settings] → [Preferences...] → [Color] from the [Edit] menu.

**Show Transparent Area**  [View] → [Show Transparent Area]

Clicking the [Show Transparent Area] icon on the tool bar and turning on the option shows the transparent parts in light blue.



**Tips**

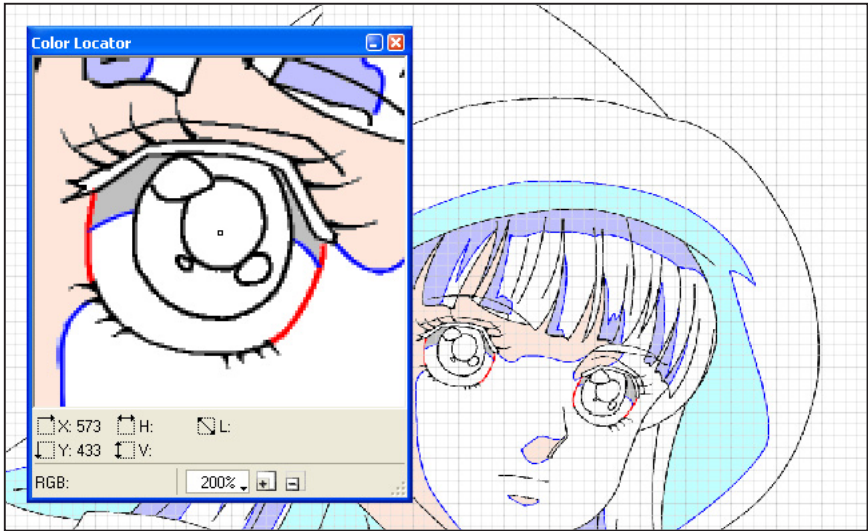
You can change the color used for showing the transparent parts by configuring the [Color] box under [Settings] → [Preferences...] → [Color] → [Transparent] of the [View] menu.

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**Zooming in a selection: Color Locator** **F8** [Window] → [Color Locator]

Color locator is a palette that shows an amplified image of an area near the mouse pointer with detailed information in real time. To move the palette, drag the title bar. To resize, drag any of its sides.



**Indicators**

In the lower left of the palette, indicators show the mouse pointer coordinates in pixels.

- **[X]**  
Shows the mouse pointer X coordinates relative to the upper left corner of the image.
- **[Y]**  
Shows the mouse pointer Y coordinates relative to the upper left corner of the image.
- **[H]**  
Shows the X side length of the selection.
- **[V]**  
Shows the Y side length of the selection.
- **[L]**  
Shows the diagonal length of the selection.
- **[RGB]**  
Shows the color at the mouse pointer in R (red), G (green), and B (blue), with each component expressed in the 0 - 255 range.
- **[View Scale Switch]**  
Allows you to change the view scale.
- **[Zoom In]**  
Allows you to amplify at every mouse click.
- **[Zoom Out]**  
Allows you to reduce at every mouse click.

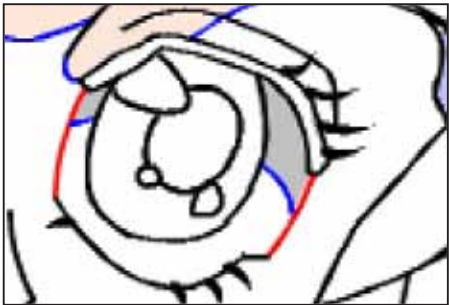
**Viewing with vectors**

Display mode of vectors can be selected from the [View] menu.

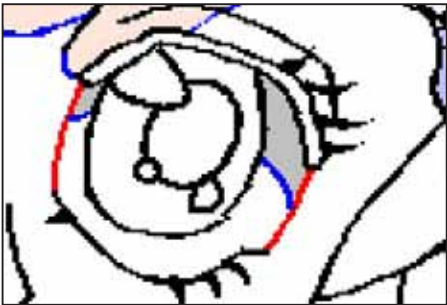
**Show Anti-aliasing**

Anti-aliasing is a function that smoothes edges. The function allocates intermediate colors to the jagged edge to show a smooth transition.

Turning off [Show Anti-aliasing] by deselecting its check box shows a jagged edge. However, the scope of this function is limited to the screen view and does not affect the data themselves. Turning off [Show Anti-aliasing] would ease the processor load of your computer.



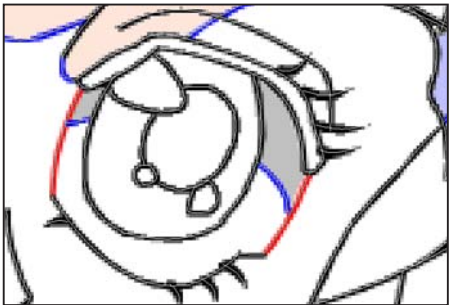
[Show Anti-aliasing]: ON



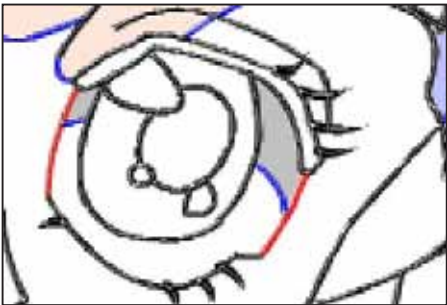
[Show Anti-aliasing]: OFF

**Show Center Line / Show Vector Start & End Points**

A line in vector drawing is a set of drawing information that includes coordinates of points, line connection points, planes, etc. Turning on [Show Center Line] is useful when it is necessary to be aware of the center of the lines for joining them correctly with the [Join Line] tool, for example. Normally, you may work with this function turned off. Turning on [Show Vector Start & End Points] shows vectors that do not intersect other lines.



[Show Center Line]: ON

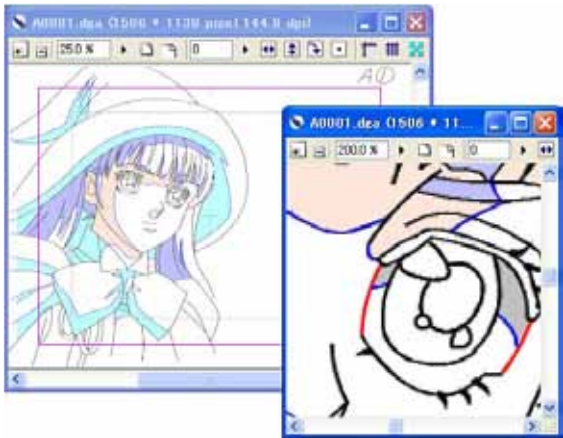


[Show Center Line]: ON  
[Show Vector Start & End Points]: ON

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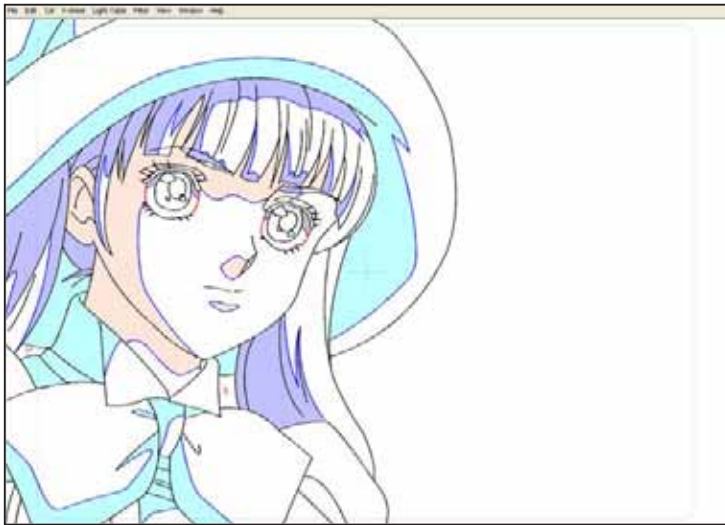
**Multi-View** [Window] → [Documentation] → [New Cel Window]

- This allows you to open the same image in multiple [Cel] windows.
- This function also allows you have an amplified image along with a "Fit on Screen" image which is convenient for working on a detail while keeping an eye on the overall picture.
- Editing the image in one window affects the image in all others.



**Full Screen mode** [Window] → [Documentation] → [Full Screen Mode]

- This allows you to hide all other windows and use the entire screen space for the [Cel] window which is convenient when you need large a drawing area, for example.



**Arrange Palettes** [Window] → [Arrange Palettes]

This function returns the palettes moved during the work to their home position.

**[Arrange to Default Position]**

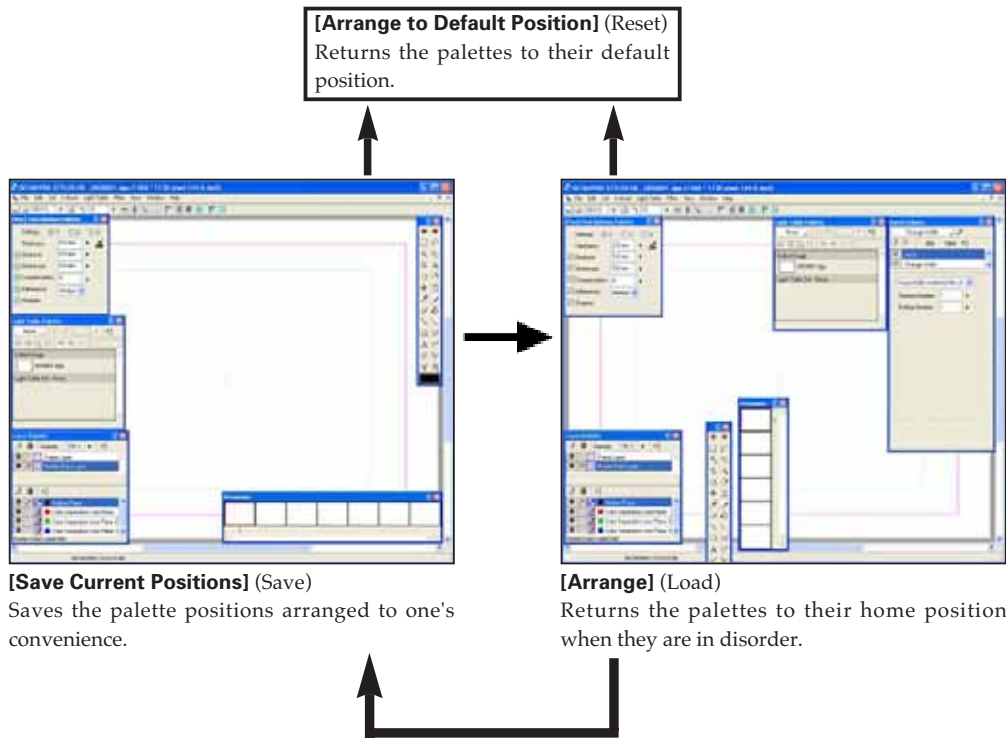
Returns the palettes to their default position.

**[Save Current Positions]**

Saves the current palette positions.

**[Arrange]**

Returns the palettes to the positions saved with [Save Current Position].



**Tips**

Palettes can be shown or hidden all together using the [Enter / Return] key.

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RETAS!PRO

# Chapter 6

## Drawing Paper and Frame

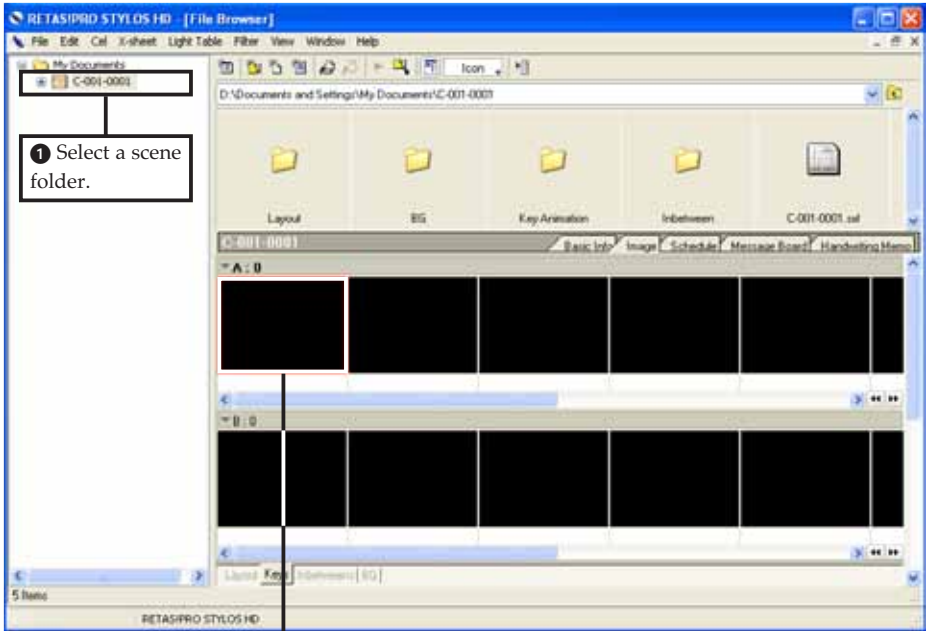
# Drawing paper (cel)

## Creating a cel the easy way

The procedure for creating a drawing paper (cel) as specified when creating the scene folder is as follows.

### 1. Open the file browser

Open the [File Browser] from the [Window] menu.



2 Double click a black cell (a cell without cel) in the [Cel Bank].

### 2. Open the Cel window.

A new drawing paper ([Cel] window) as specified when creating the scene folder appears.

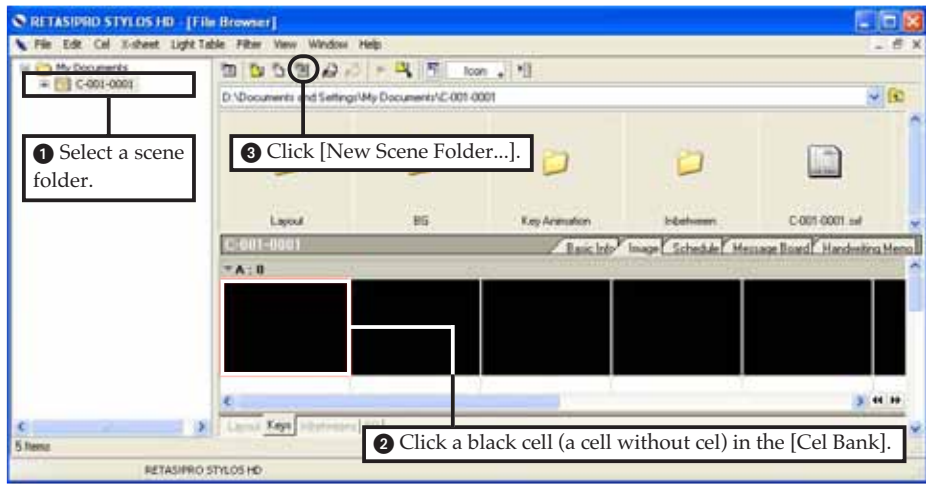


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Creating a new cel

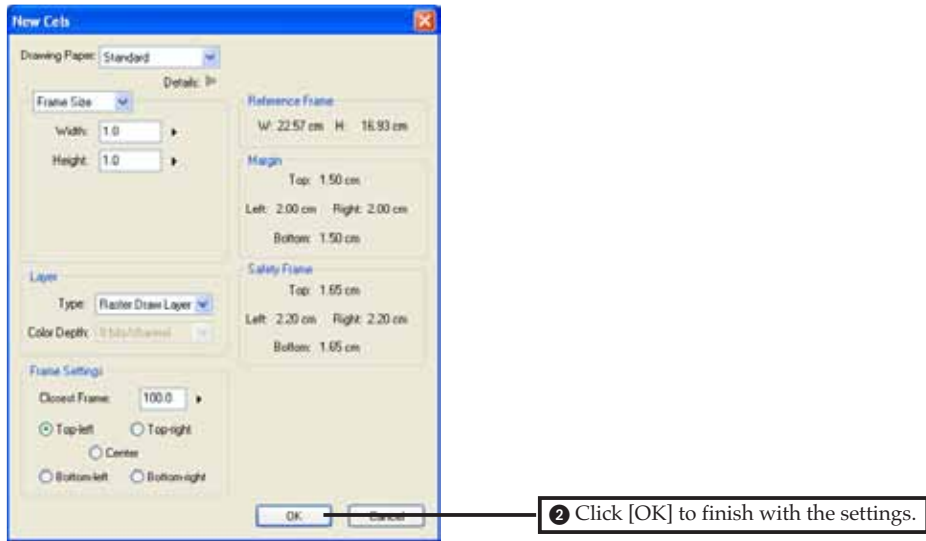
1. Open the scene folder.

Open the [File Browser] from the [Window] menu.



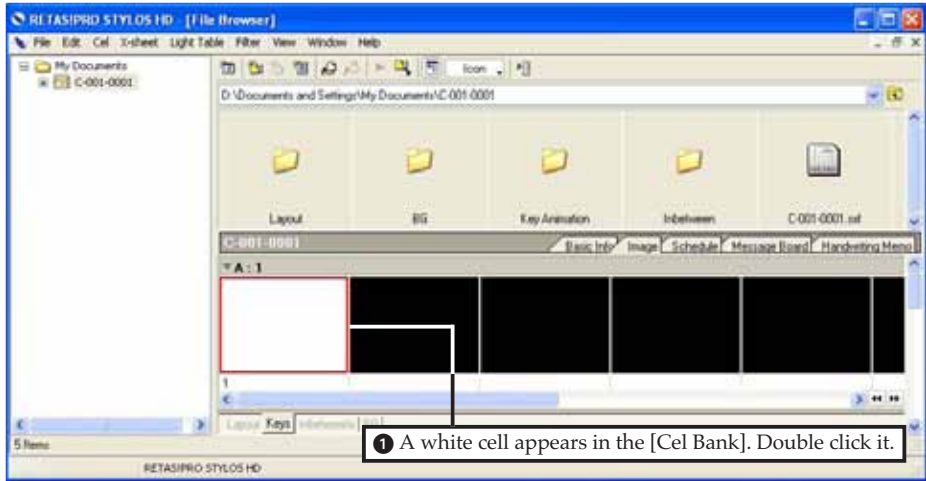
2. Open the New Cels dialog box.

Configure the new drawing paper settings.



3. Open the scene folder.

The screen returns to the file browser.



4. Open the New Cel window.

A new drawing paper ([Cel] window) appears.



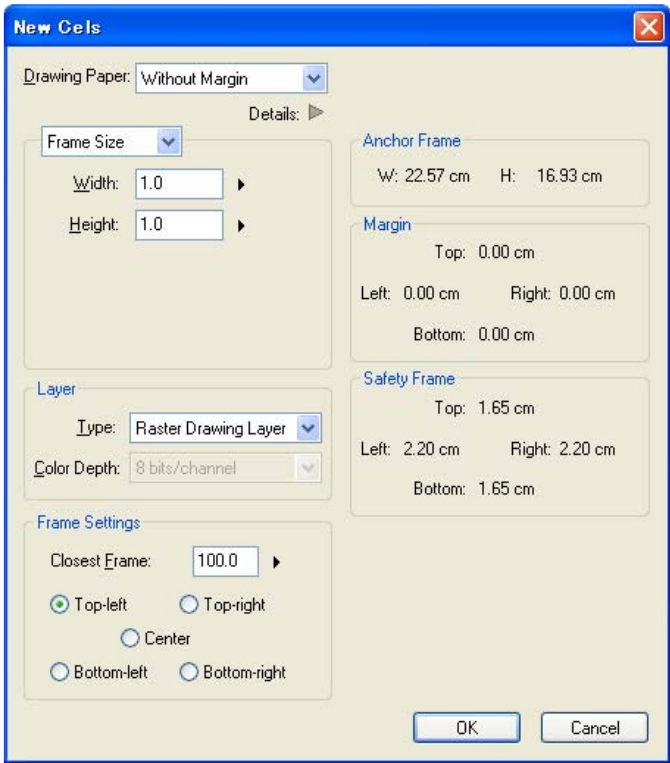
Tips

New cels can also be created by selecting [File] → [New] → [Cel]. However, in this case the cel does not have a default save destination scene folder.

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New Cels dialog box



[Drawing Paper]

Shows the scene number that was entered when the scene folder was created, and the currently selected drawing paper size that was specified for the scene folder when the scene folder was created. Also allows you to select the drawing paper from among [Standard], [PencilMan], [STYLOS], and [Without Margin].

• [Details]

Click the triangle to expand the right part of the dialog box and show the detailed information on [Anchor Frame], [Margin], and [Safety Frame] for the currently selected drawing paper.

[Frame Size/Canvas Size]

A pull-down menu that allows you to select either of the following options.

- **[Frame Size]**  
Allows you to specify the canvas size using frame as the unit.
- **[Canvas Size]**  
Allows you to specify the canvas size and resolution numerically.

[Layer]

Allows you to select the type of layer from among [Vector Drawing Layer], [Raster Drawing Layer], and [Raster General Layer].  
For [Raster General Layer], you can also select the [Color Depth]: [8 bits/channel] or [16 bits/channel].

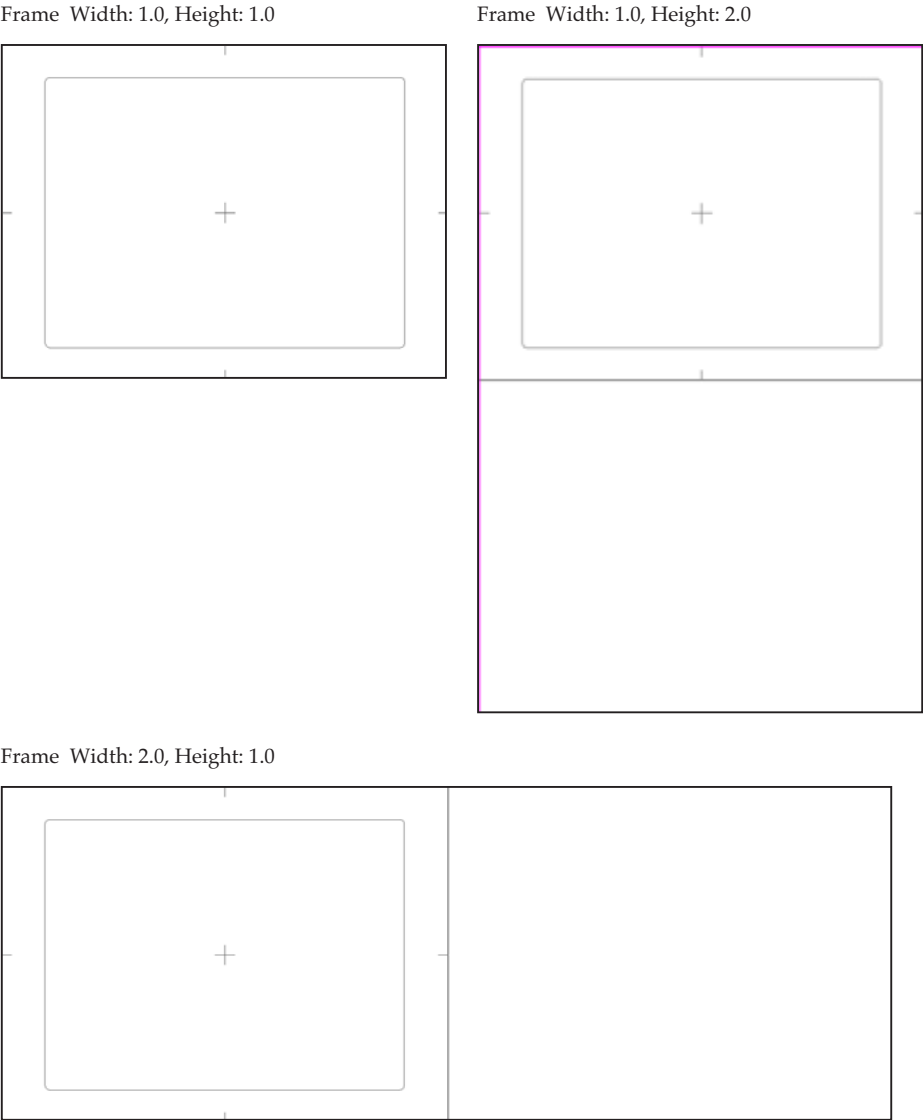
[Frame Settings]

- **[Closest Frame]**  
Allows you to specify how close (T. U.) the frame will be with respect to the drawing paper to create. RETAS!PRO adjusts the distance so that the size of the closest (T.U.) frame becomes "100Frame".
- **Frame position**  
Allows you to select the anchor frame position for the [Closest Frame] view from among [Top-left], [Top-right], [Center], [Bottom-left], and [Bottom-right].
- **[OK]**  
Confirms the settings and closes the dialog box.
- **[Cancel]**  
Cancels the settings and closes the dialog box.

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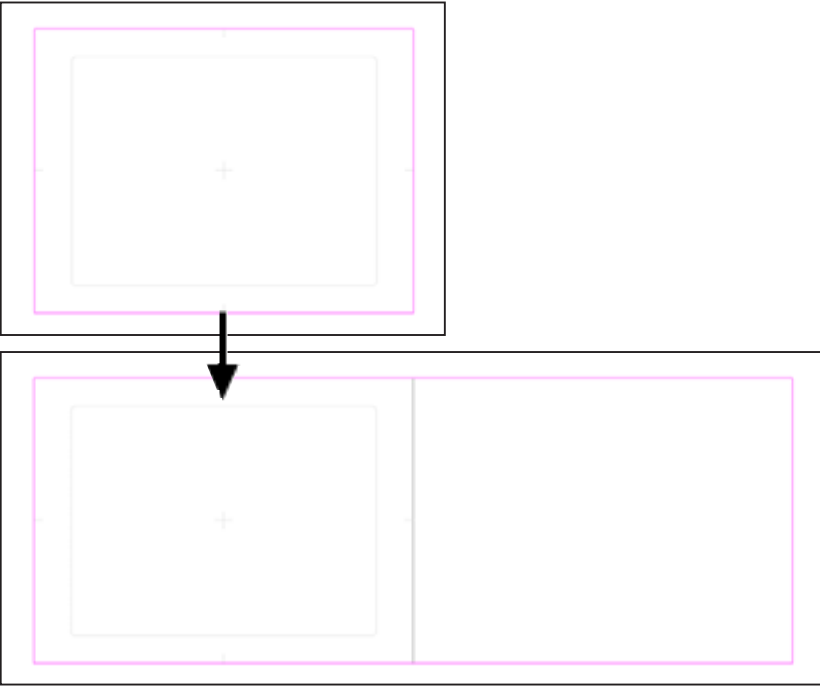
Specifying the drawing paper size based on number of frames

RETAS!PRO allows you to use frame as the unit for specifying a drawing paper size in dialog boxes such as the [New Cels].



Changing a drawing paper size

The procedure for changing a drawing paper size afterwards is as follows.



1. Open the Page Setup dialog box.

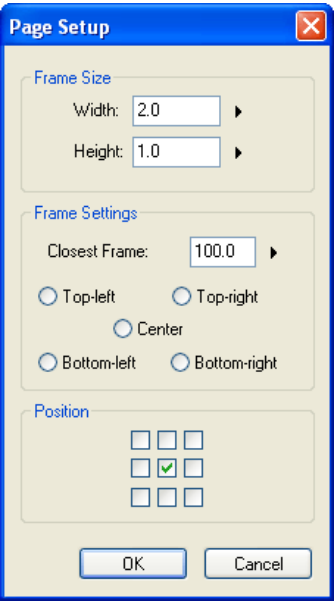
Open the [Cel] window with the drawing paper size you want to change. Then select [Page Setup...] from the [Cel] menu. The [Page Setup...] dialog box that allows you to configure the detailed settings appears.



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Page Setup dialog box



[Frame Size]

Specify the width-to-height ratio of the drawing paper's frame.

[Frame Settings]

• [Closest Frame]

Allows you to specify how close (T. U.) the frame will be with respect to the drawing paper to create. TraceMan adjusts the distance so that the size of the closest (T.U.) frame becomes "100Frame".

• Frame position

Allows you to select the anchor frame position for the [Closest Frame] view from among [Top-left], [Top-right], [Center], [Bottom-left], and [Bottom-right].

[Position]

Specify the position where you want the original image to appear after the size change.

[OK]

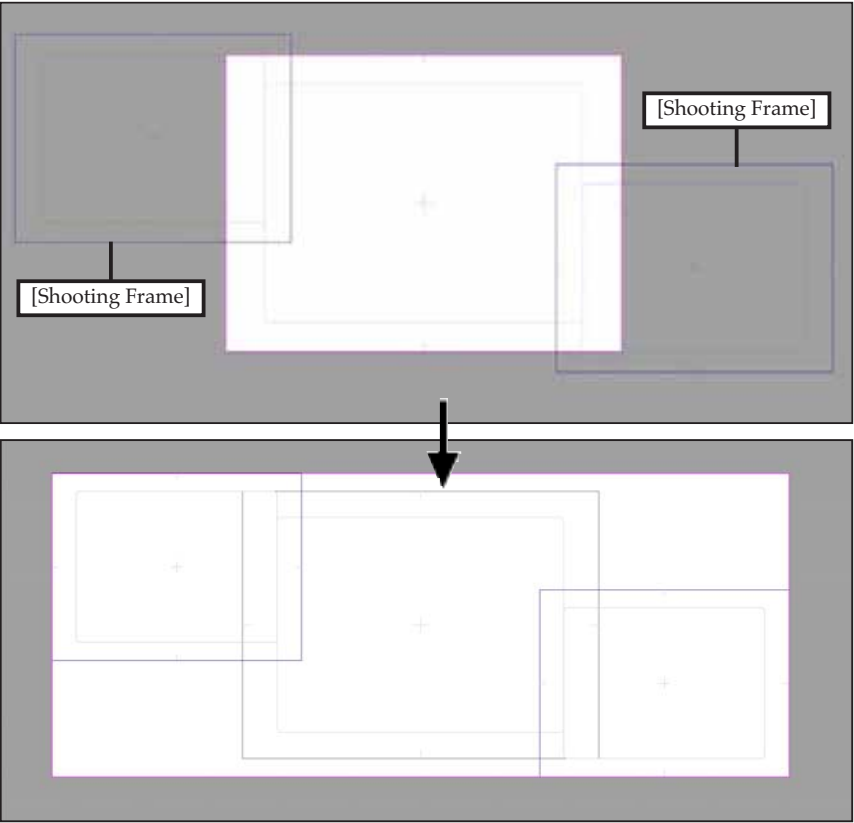
Confirms the settings and closes the dialog box.

[Cancel]

Cancels the settings and closes the dialog box.

Changing a drawing paper size based on the shooting frame

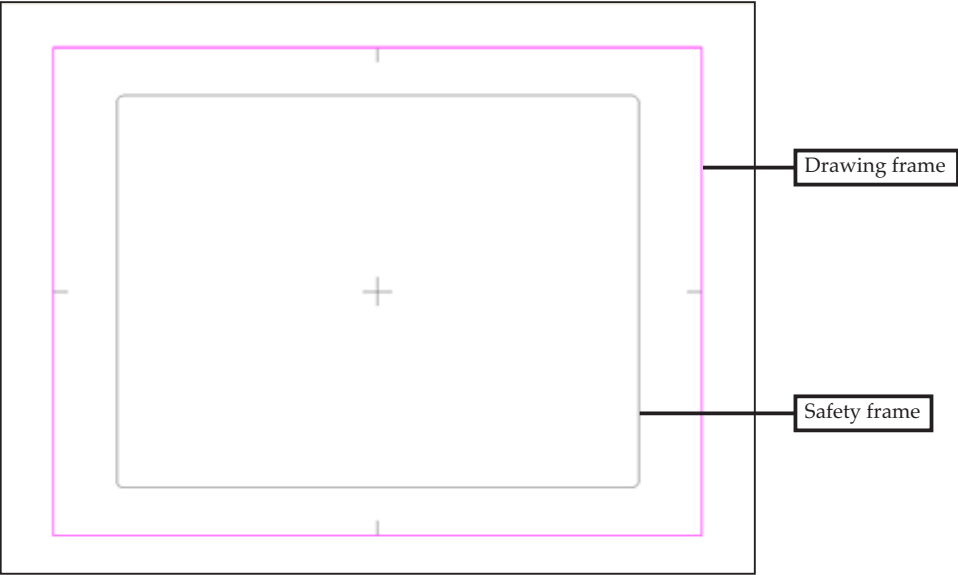
The procedure for changing a large drawing paper size created using the [Page Setup] dialog box to fit the specified [Shooting Frames] is as follows.



# Frames

## Drawing frame and safety frame

[Safety Frame] is the inner drawing area, and [Drawing Frame] the tolerance around the inner drawing area.



### Drawing frame

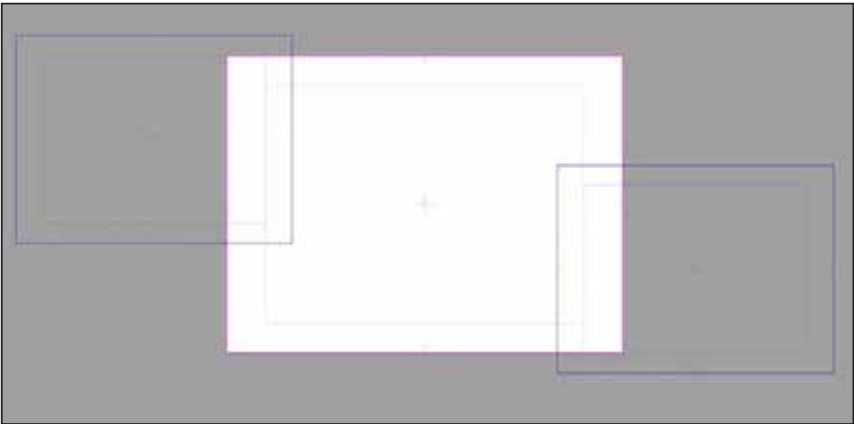
Is the drawing area. The edges of your drawing must fall beyond this frame. If a drawing edge falls within this frame, a [short drawing exposure] occurs.

### Safety frame

Also called TV frame. Is the area that will be shown on the TV screen. Drawing outside this frame may not appear on the TV. So, make sure to draw scenes you want to show on TV inside this frame.

### 1. Open the Cel window.

Open the [Cel] window with the [Shooting Frame].

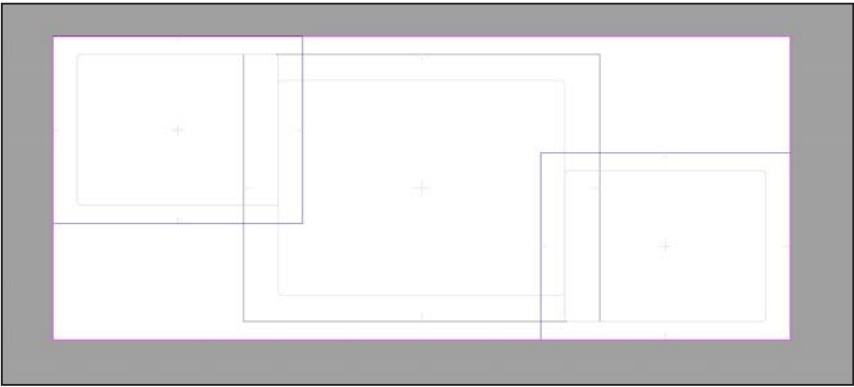


### 2. Select the command.

Select [Change Paper Size to Contain All Shooting Frames] from the [Cel] menu.

### 3. Completion

The drawing paper size is changed to accommodate the [Shooting Frames].

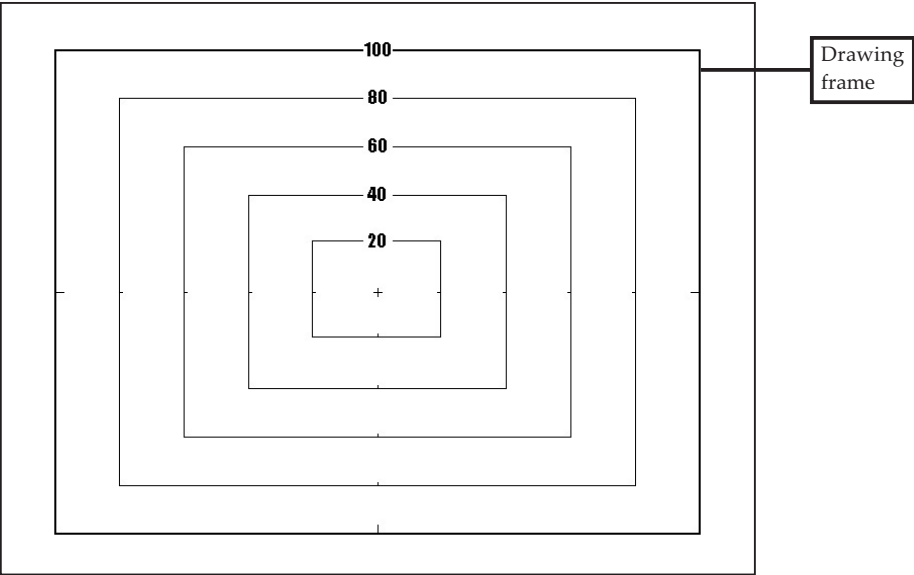


## Tips

For details on how to create a [Shooting Frame], see "Chapter 13".

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100Frame



100Frame means a "drawing frame with a size of 100%". A frame half of the 100Frame size is called "50Frame" whilst a frame twice the 100Frame size is called "200Frame".

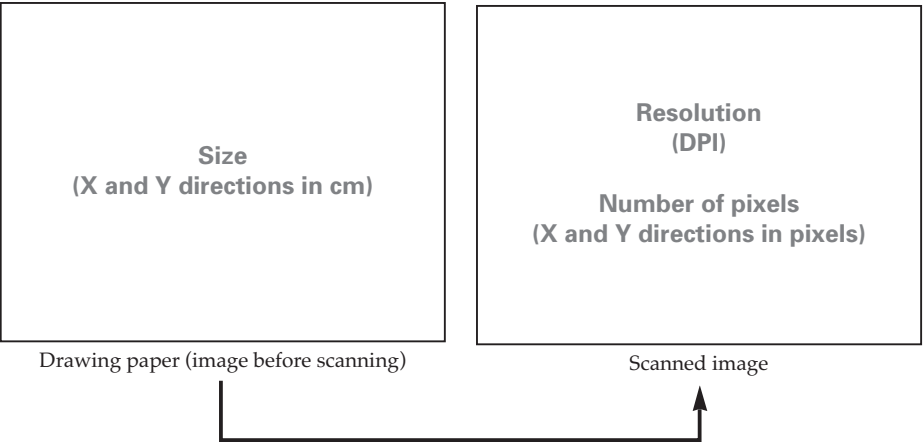
Tips

This term is widely used in the animation industry. However, each company/studio has its own interpretation thus the definition above applies to RETAS!PRO only.

Standard resolution

"Standard resolution" is a numeric value of utmost importance in digital animation production.

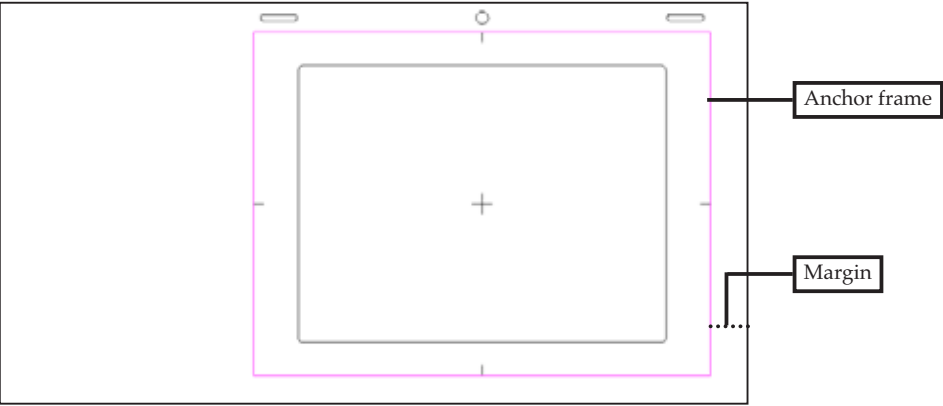
- The value gives information about
- 1. The size of the drawing paper (X and Y directions in cm)
  - 2. The resolution of the scanned image (DPI)
  - 3. The number of pixels in the scanned image (X and Y directions in pixels)



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Anchor Frame and Margins

In RETAS!PRO HD, the [Anchor frame] and [Margin] concepts are implemented in all of the series applications.



Anchor frame

The anchor frame is the equivalent to the [Peg Holes] in the conventional inbetween drawing paper.

With conventional inbetween drawing papers, papers of diverse sizes are aligned using the peg holes as reference.

With digital inbetween drawing papers, each animator/assistant aligns the images at his/her discretion by referencing the material when diverse canvas sizes are present as the software canvases do not carry any reference point.

The DGA and CEL formats solve this ambiguity by embedding an "anchor frame" in each image to serve the role of the pegbar for aligning the images automatically when loading them to the Light Table or when overlapping them in a Cel Stack.

Margin

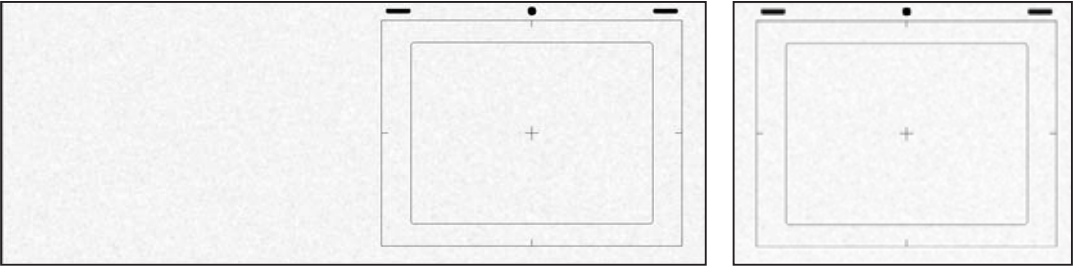
Margin is the area outside the drawing frame.

Margin gives room for camera-works such as "camera shake". However, without clear standards about margin size, inconveniences such as difficulty to identify the margin at a glance, or necessity of on-the-spot adjustment during shooting are often.

In the DGA and CEL formats, the margin is specified based on the drawing frame information embedded in the image so that you can make use of the margin related functions.

With paper

Positioning is automatic as alignment is done using the [Peg Holes].



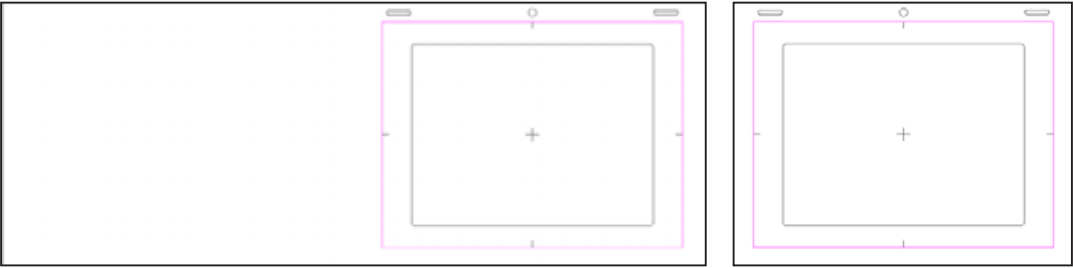
With generic digital format

It is impossible to know whether alignment is [Left], [Center], or [Right] by just seeing the data as there is no [Peg Hole] information.



With DGA/CEL format

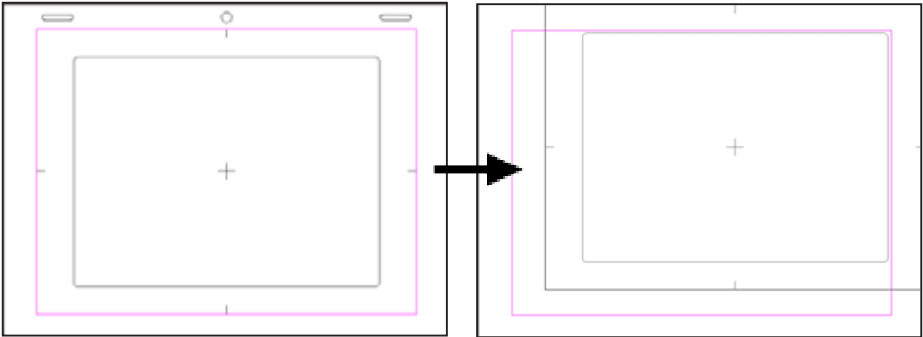
Positioning when overlapping the images in the light table is automatic as images of different sizes can be aligned using the [Anchor Frame] which is the software equivalent of the [Peg Holes].



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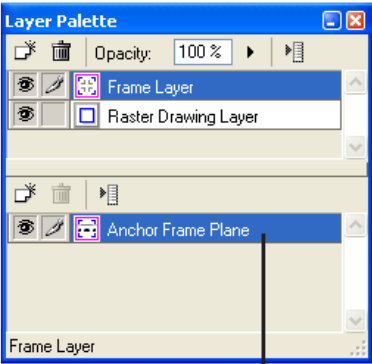
Moving the anchor frame

The procedure for moving the [Anchor Frame] which is equivalent to making new peg holes in the drawing paper is as follows.

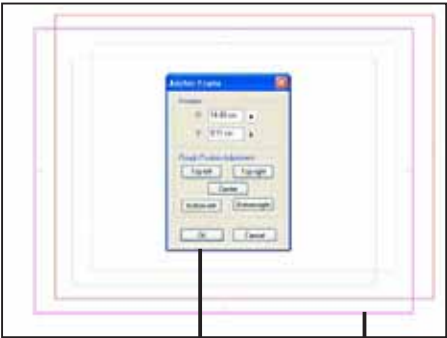


1. Open the Anchor Frame dialog box.

Open the [Anchor Frame] dialog box and configure the [Anchor Frame] settings.



Double click [Anchor Frame Plane] from [Frame Layer] on the [Layer Palette].



Configure the details settings in the [Anchor Frame] dialog box.

Place the mouse pointer at any point within the red frame ([Anchor Frame]) and drag. The [Anchor Frame] moves.

Anchor Frame dialog box



- **[Position]**  
Shows the distance from the upper left corner of the drawing paper to the cross at the center of the [Anchor Frame].
- **[Rough Position Adjustment]**  
Click either [Top-left], [Top-right], [Center], [Bottom-left], or [Bottom-right] button. The [Anchor Frame] will be positioned there.
- **[OK]**  
Confirms the settings and closes the dialog box.
- **[Cancel]**  
Cancels the settings and closes the dialog box.

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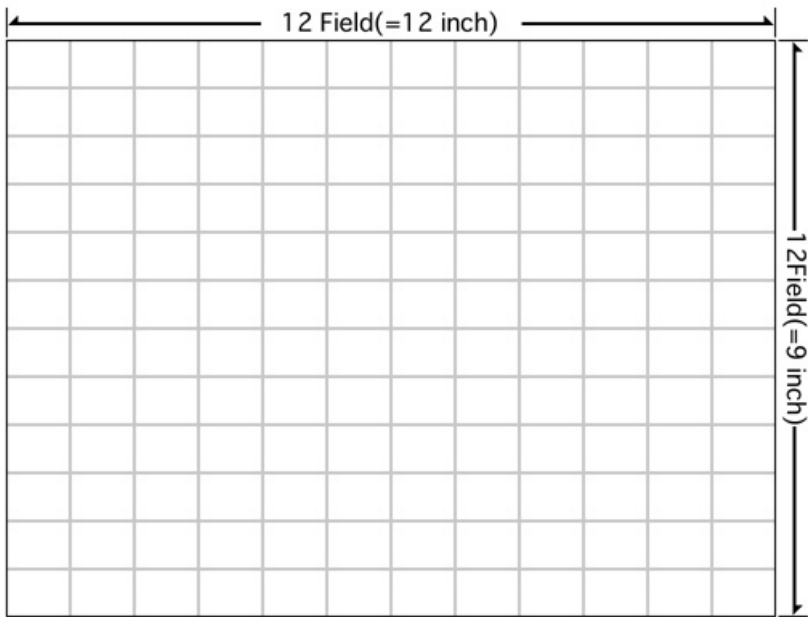
# 12 Field (USA)

TraceMan HD also supports the "12 Field", a frame designation system mainly used in the USA.

"12 Field" is a standard for framing mainly used in the USA for giving framing (angle of view) direction. The name comes from the area that is included in a static camera shot.

T.U./T.B. directions are given like "T.U. up to 6 Field", "T.B. up to 15 Field", etc.  
In RETAS!PRO, the frame comprised within the "12 Field" is divided in 12x12 cells and the angle of view given by each of the cells (1x1) is called "1 Field". An angle of view of a frame half of the "12 Field" size is called "6 Field" whilst the angle of view of a frame twice the "12 Field" size is called "24 Field".

The width (horizontal length) of a "12 Field" is always 12 inches. Therefore, in a standard frame where the screen aspect ratio is 4:3, the vertical length is 9 inches.



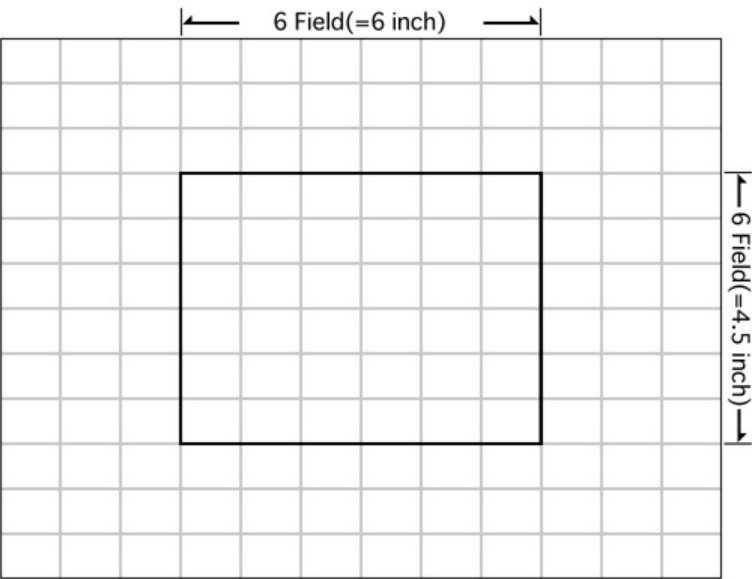
## Tips

To enable the 12 Field, switch the [Scanner] setting under [Edit] menu → [Settings] → [Preferences...] to [Field].

For a "vista frame" based on the "12 Frame", the screen aspect ratio becomes 9:5. However, the width (horizontal length) remains unchanged at 12 inches. Therefore, in this case the vertical length is approximately 6.7 inches.

That is, in "12 Field", the relation is always "1 Field = 1 inch" in the horizontal direction. However, in the vertical direction, the length of the frame depends on the type of frame. So, the relation "1 Field = 1 inch" is true only for a square frame.

In the "12 Frame" system, the width (horizontal length) of a "6 Field" is always 6 inches. But the vertical length depends on the used screen aspect ratio.



In the "12 Frame" system, the width (horizontal length) of a "3 Field" is always 3 inches. But the vertical length depends on the used screen aspect ratio.

There is also a system called "16 Field" where the width (horizontal length) is 16 inches. This system is the same as the "12 Field" with the exception of its width (horizontal length) which is 16 inches.

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RETAS!PRO

# *Chapter* **7**

## **Layers and Planes**



# Multi-layer

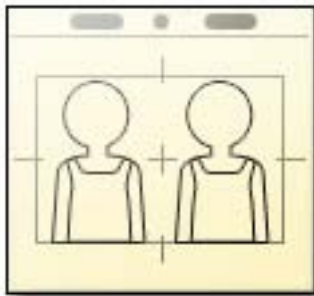
## What is DGA or CEL format?

In RETAS!PRO HD, two new proprietary multi-layer image formats have been added to realize two of the design objectives: "high resolution, high quality image" and "one-source, multi-use".

### Multi-layered image for drawing: DGA format (Digital Graphic for Animation, extension: dga)

The multi-layer structure of RETAS!PRO is such that allows you to use both vector and raster formats on the same image.

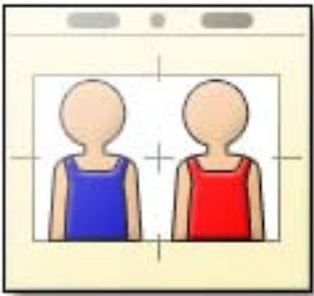
- This is an image format that can be used only with STYLOS HD.
- Image in this format can be only browsed with TraceMan HD and PaintMan HD.
- Data structure of this format is specialized for linear drawing, a characteristic of drawings used in animation and is not compatible with the painting and post-painting processes.
- Images in this format can be used in processes covered by STYLOS HD, that is from layout drawing to keys and inbetweens drawing, and drawing correction.



### Multi-layered image for Painting: CEL format (Cel, extension: cel)

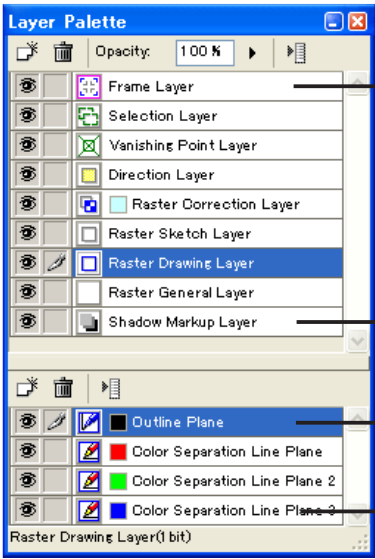
The multi-layer structure of RETAS!PRO is such that allows you to use both vector and raster formats on the same image.

- This format is used mainly with TraceMan HD and PaintMan HD.
- An image in this format can be only browsed with STYLOS HD.
- This is an image format used mainly in the painting and post-painting processes.



## What is a multi-layer structure?

Images in DGA or CEL format are composed of "layers" dedicated to a particular process, and each layer is composed of "planes" which are where editing can be done. The export of a layer is selectable, that is, you can exclude those that are only necessary during intermediate processes but not in the final output from the export.



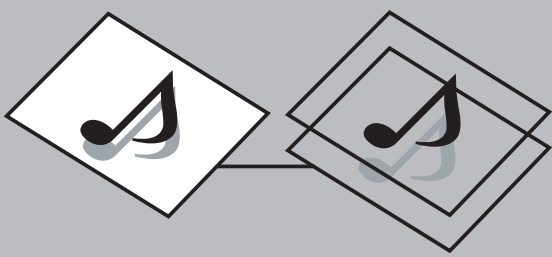
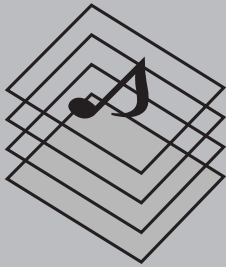
Layers of diverse formats can be used in DGA/CEL format.

With DGA/CEL format, each layer has in turn have child layers, that is, planes under it.

## Tips

**Layer**  
You may think the layer as the equivalent to a cel in the animation. Thus, an image is a hierarchical structure composed of multiple overlapping layers.

**Plane**  
Each of the layers itself has a hierarchical structure composed of planes, where a plane is the smallest unit of image. Planes can be added and deleted as needed.

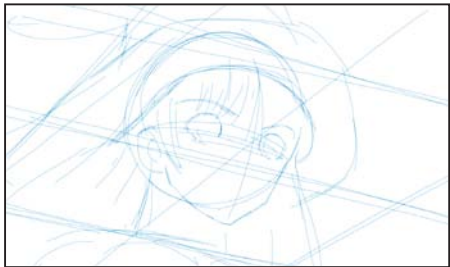
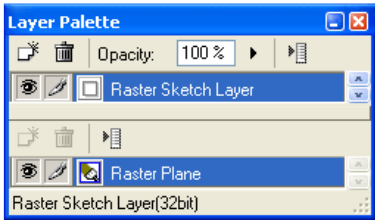


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Drawing-related layers

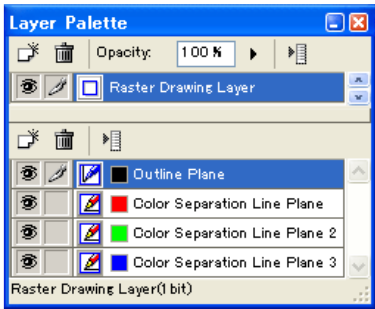
Raster sketch layer (Only DGA)

Raster format layer for drawing sketches.  
Lines drawn in this layer get thicker as they are redrawn as when drawing with a pencil.



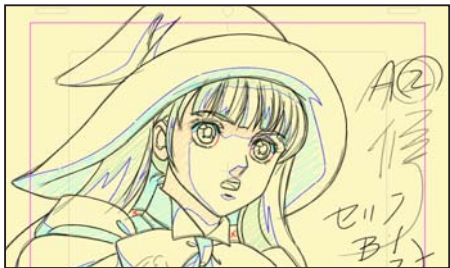
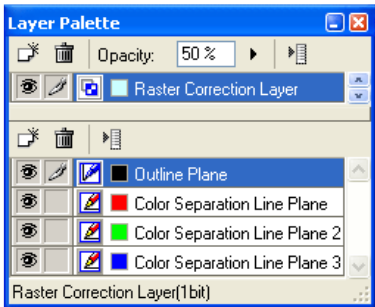
Raster drawing layer (Only DGA)

Raster format layer for drawing.  
Outlines and color separation lines can be added to drawings in this layer. You can also use this layer to change the order of the drawings.



Raster correction layer (Only DGA)

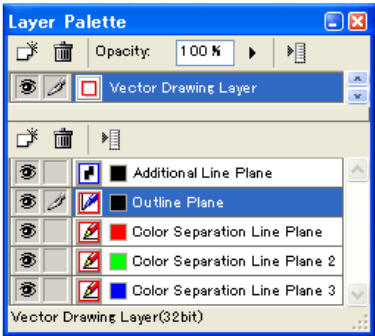
Raster format layer for correcting drawings.



[Correction Layer] over [Drawing Layer]

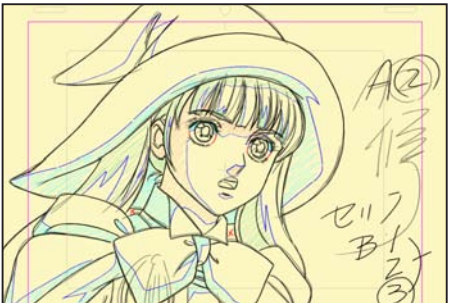
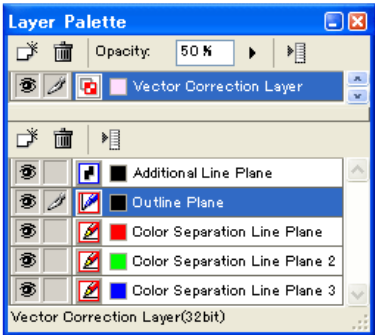
Vector drawing layer (Only DGA)

Vector format layer for drawing.  
Outlines and color separation lines can be added to drawings in this layer. You can also use this layer to change the order of the drawings.



Vector correction layer (Only DGA)

Vector format layer for correcting drawings.



[Correction Layer] over [Drawing Layer]

Tips

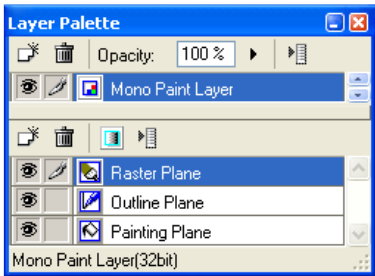
- Drawings on the raster drawing layer are internally processed with 8 times the necessary resolution. For this reason, images of these drawings can be enlarged to a certain extent without losing quality.
- It is not possible to have a mix of raster and vector drawing layers on the same image.

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Painting and BG-related layers

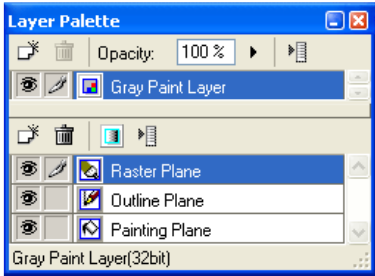
Mono paint layer (Only CEL)

When a [Mono Trace] image from the conventional RETAS!PRO is loaded to RETAS!PRO HD, it is loaded as an image having a [Mono Paint Layer]. Internally, the [Mono Paint Layer] comprises the [Outline Plane] and the [Painting Plane] which allows you to work as usual, by switching between [Outline] and [Painting].



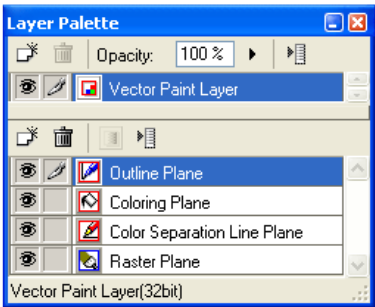
Gray paint layer (Only CEL)

When a [Gray Trace] image from the conventional RETAS!PRO is loaded to RETAS!PRO HD, it is loaded as an image having a [Gray Paint Layer]. Internally, the [Gray Paint Layer] comprises the [Gray Plane] and the [Painting Plane] which allows you to work as usual, by switching between [Outline] and [Painting].



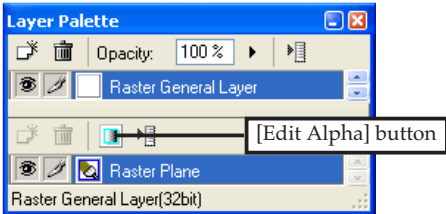
Vector paint layer (Only CEL)

This layer is the destination layer when exporting a drawing drawn on the [Vector Drawing Layer] with STYLOS HD for painting, or the layer used by an image that is vector traced with TraceMan HD. Using the [Vector Paint Layer] with PaintMan HD allows you to paint the data using the vector format.

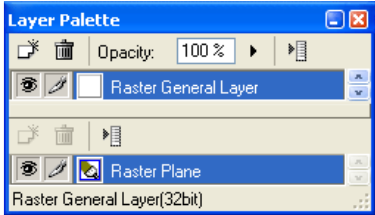


Raster general layer

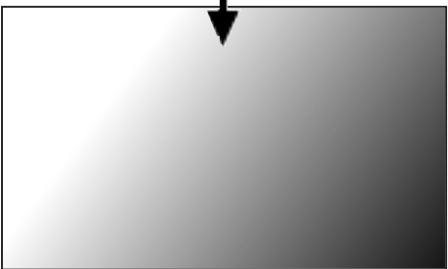
[Raster General Layer] is a layer used mainly for general bitmap images such as background.



(STYLOS HD)



(TraceMan HD and PaintMan HD)



Alpha channel

Tips

In TraceMan HD and PaintMan HD, it is possible to edit the [Transparency] of the [Raster Plane] under the [Raster General Layer].

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Non-image related layers

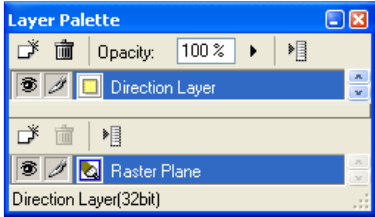
Shadow markup layer (Only DGA)

This is a layer exclusively for shadow markup. Create this layer on top of the drawing layer so that you can perform the shadow markup by referencing the contents of the [Outline Plane] and/or [Color Separation Line Plane] of the drawing layer. You can mark the shadows by painting with the [Fill] tool (instead of using the traditional color pencil) or mark the parts that do not need paint at all.



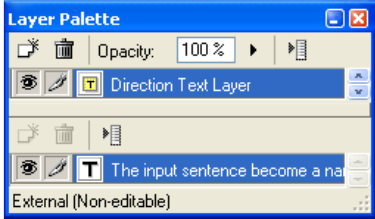
Direction layer

This layer is for drawing directions related to images. Since contents on the direction layer are ignored in a normal rendering, you can draw any direction without fear of affecting the image.



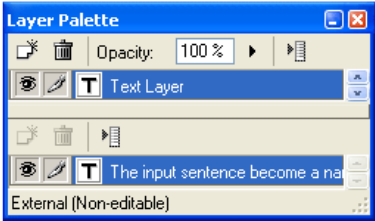
Direction text layer

This layer is for writing directions related to images. The text of the direction can be edited. Since contents on the direction text layer are ignored in a normal rendering, you can write any direction without fear of affecting the image.



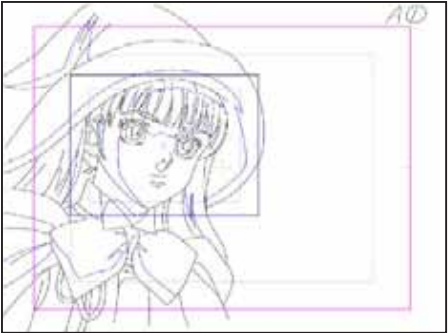
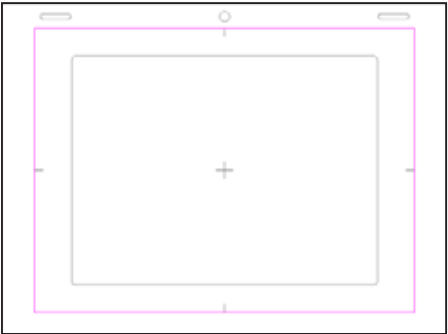
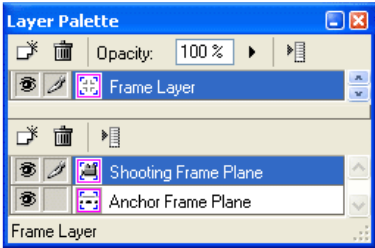
Text layer

This is a layer for texts. The text can be edited. It is also possible to add a line to the text.



Frame layer

This is a layer for show the [Anchor Frame Plane] and/or the [Shooting Frame Plane] on the image to help you in the positioning.



Tips

There are two types of shadow markup layers, those created with [Cel] → [Shadow Markup...], and those created with [Layer] → [New Layer] from the [Layer Palette].

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# Layer

## Basic operations using Layer Palette

Layer operations are performed using the [Layer Palette].

### 1. Selecting a layer

To select a layer, click the layer name field in the upper part of the [Layer Palette]. The layer is selected when shown highlighted.

### 2. Selecting a plane

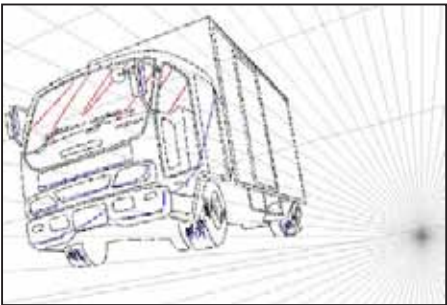
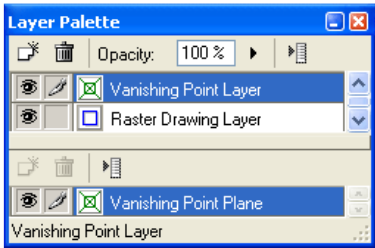
The plane must be selected from the lower part of the [Layer Palette] after the layer. To select, click the plane name field. The plane is selected when shown highlighted.

### 3. Showing/Hiding a layer or plane

The content of an image layer and/or plane to be shown in a [Cel] window can be shown or hidden by clicking the [Show /Hide Layer] icon on the [Layer Palette].

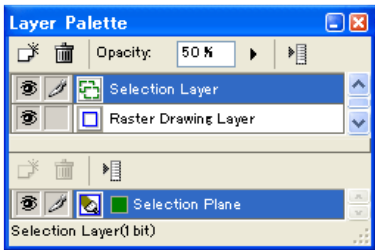
### Vanishing point layer

This is a layer for specifying and keeping a vanishing point for drawing with perspective.



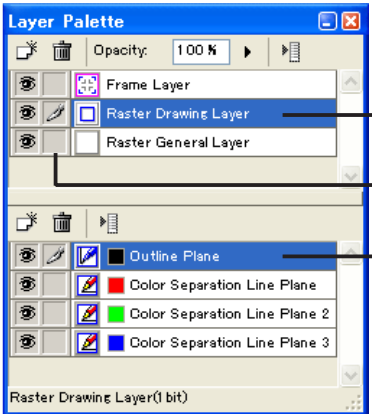
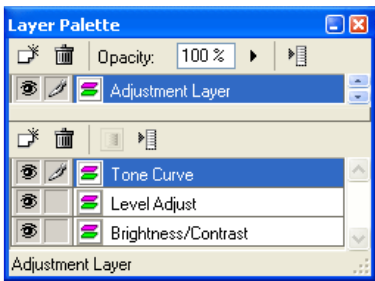
### Selection layer

This is a layer for saving and editing a selection. A selection can also be created by drawing with a drawing tool while referencing the contents of other layers.



### Adjustment layer (Only CEL)

This is a layer that results from the layerization of a tone adjustment on an image. Tone adjustment settings can be changed as well as reset.



1 Select the layer.

To select multiple layers, select by clicking on the [Drawing Permission] column.

2 Select the plane.

[Show /Hide Layer] icon

[Drawing Permission] icon: Clicking this icon when the [Show /Hide Layer] icon is shown enables drawing and editing on the layer.

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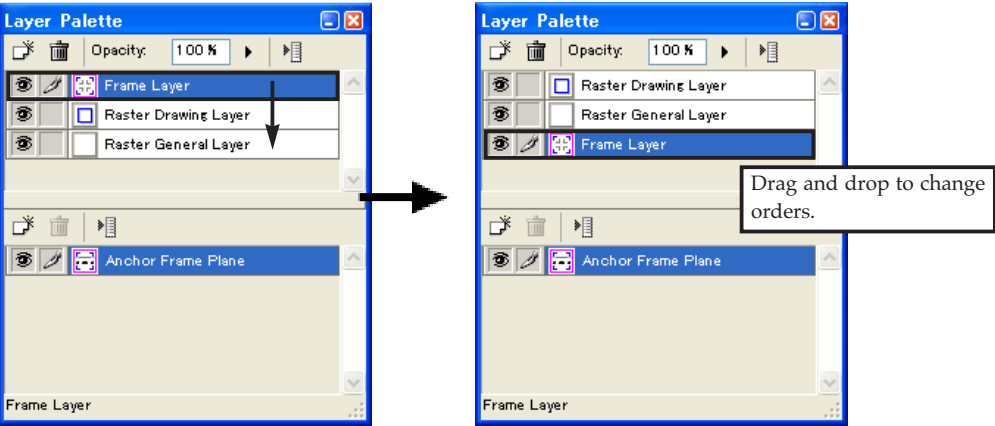
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4. Changing a layer/plane order

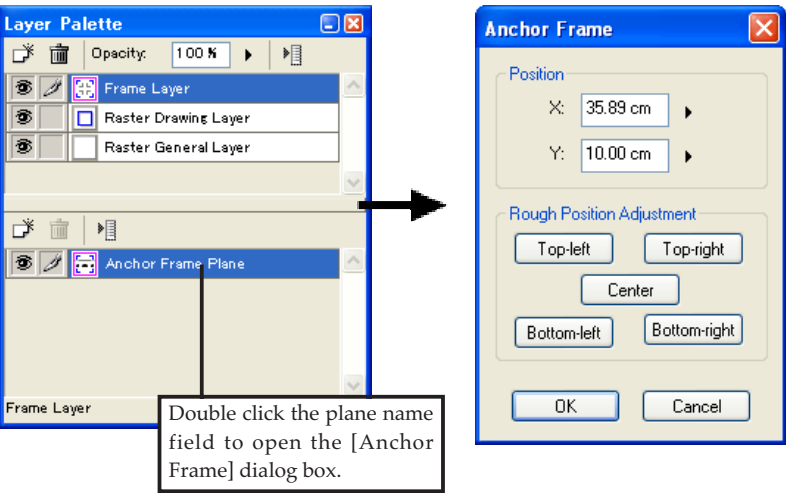
The order in which a layer/plane is arranged within an image can be changed by dragging and dropping.



5. Changing a plane settings

Planes whose settings are changeable using a dialog box are as follows.

- [Anchor Frame Plane] and [Shooting Frame Plane] of the [Frame Layer]
- [Vanishing Point Plane] of the [Vanishing Point Layer]
- [Brightness/Contrast], [Level Adjust], and [Tone Curve] of the [Adjustment Layer] (Only TraceMan HD and PaintMan HD)
- [Text Plane] of the [Text Layer] and [Direction Text Layer]

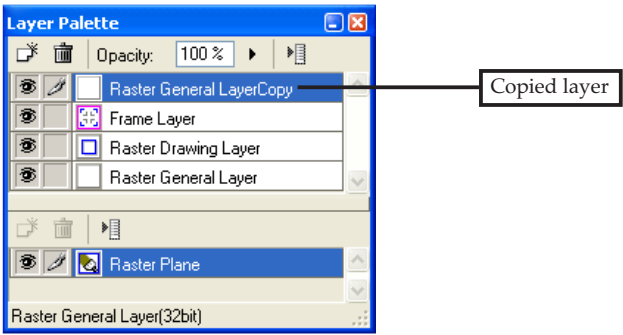


Copying a layer or plane

The procedure for copying a selected layer or plane is as follows.

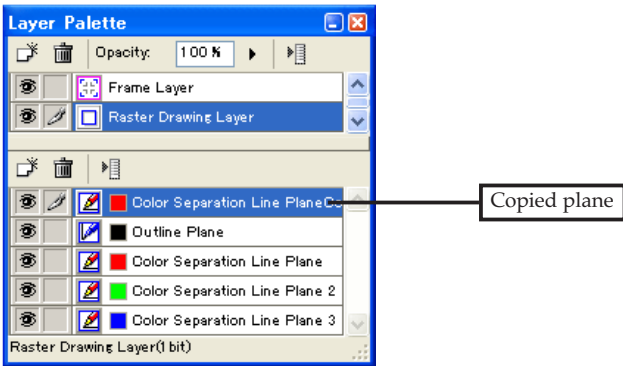
Copying a layer

Select the layer you want to copy from the [Layer Palette] then select [Layer] → [Copy] from the [Cel] menu. A layer named [○○○ Copy] appears on the [Layer Palette]. You may also make a copy by selecting [Copy] under [Show Layer Menu] in the [Layer Palette].



Copying a plane

Select the plane you want to copy from the [Layer Palette] then select [Plane] → [Copy] from the [Cel] menu. A plane named [○○○ Copy] appears on the [Layer Palette]. You may also make a copy by selecting [Copy] under [Show Plane Menu] in the [Layer Palette].



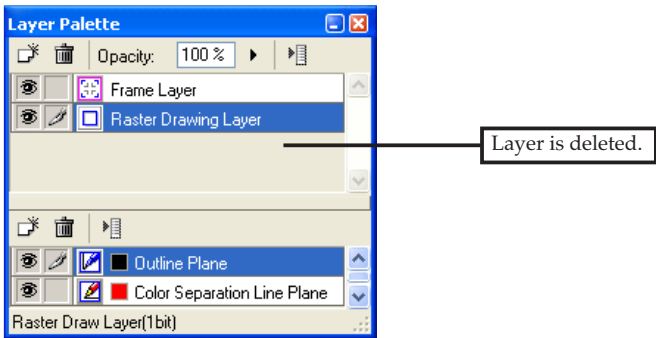
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Deleting a layer or plane

The procedure for deleting a selected layer is as follows.

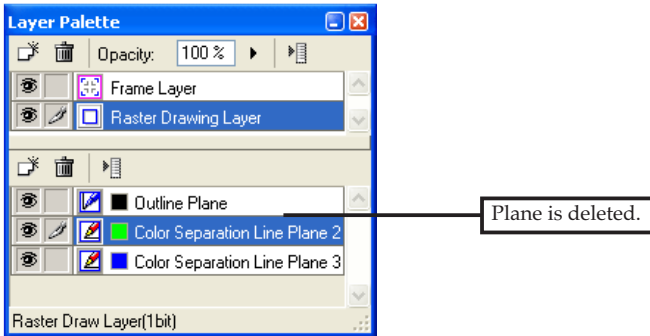
Deleting a layer

Click the layer you want to delete on the [Layer Palette] then select [Layer] → [Delete] from the [Cel] menu. The selected layer is deleted. You may also delete by selecting [Delete] under [Show Layer Menu] in the [Layer Palette].



Deleting a plane

Click the plane you want to delete on the [Layer Palette] then select [Plane] → [Delete] from the [Cel] menu. The selected plane is deleted. You may also delete by selecting [Delete] under [Show Plane Menu] in the [Layer Palette].



Tips

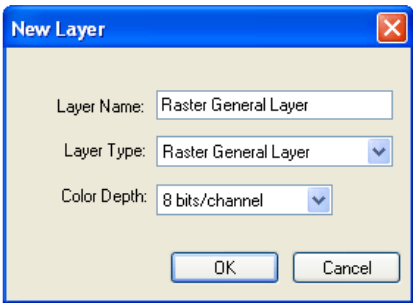
Selecting [Delete Hidden Layer] from the [Layer] menu allows you to delete a hidden layer (a layer without the eye icon) from the [Layer Palette].

Creating a new layer or plane

The procedure for creating or adding a new layer or plane is as follows.

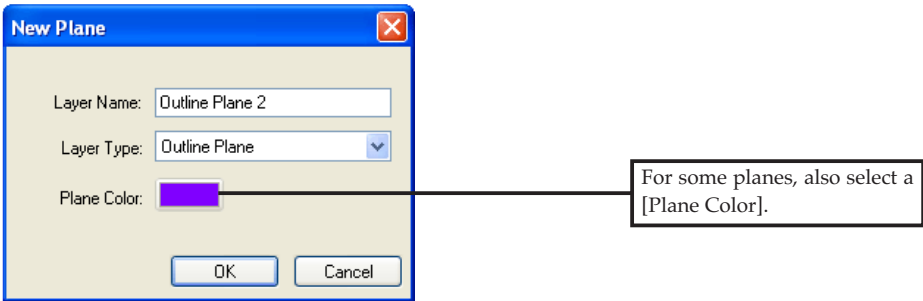
Creating a new layer

Select [Layer] → [New] from the [Cel] menu. The [New Layer] dialog box appears. Enter the [Layer Name] and select the [Layer Type] and [Color Depth] then click [OK] to create the layer.



Creating a new plane

Select [Plane] → [New] from the [Cel] menu. The [New Plane] dialog box appears. Enter the [Plane Name] and select the [Plane Type] then click [OK] to create the plane.



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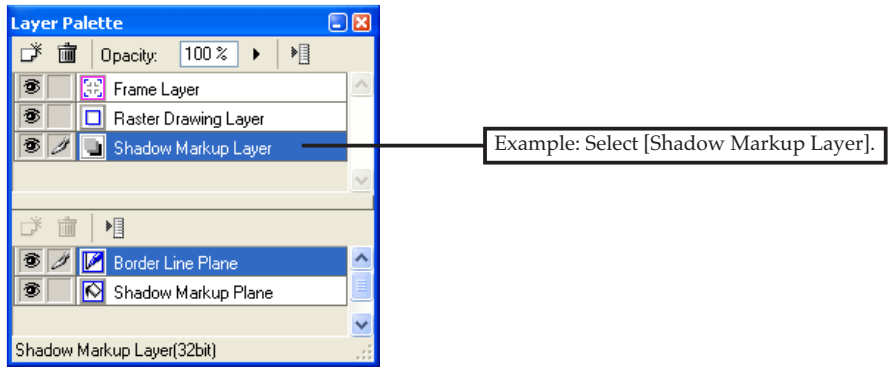


Converting a layer

The procedure for converting a layer to a layer of different type is as follows.

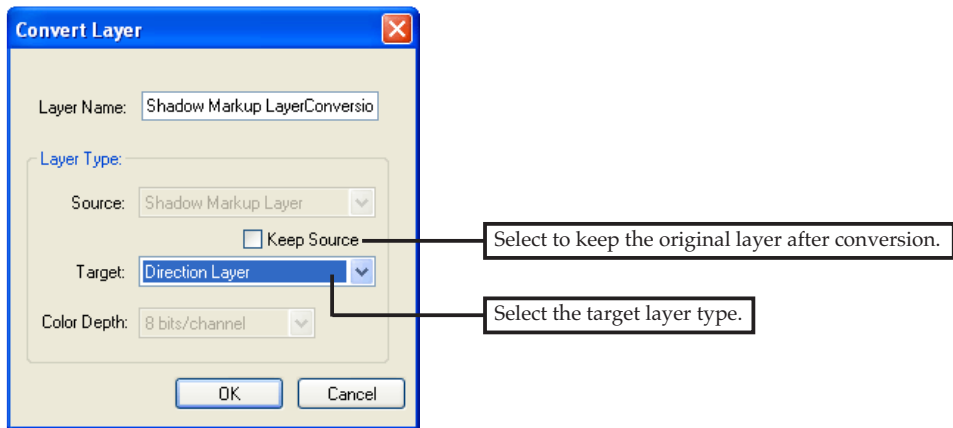
1. Select the layer.

Select the layer you want to convert to another type from the [Layer Palette].



2. Configure the [Convert Layer] dialog box settings.

Select [Layer] → [Convert...] from the [Cel] menu. The [Convert Layer] dialog box appears. Enter [Layer Name] and select [Target] in [Layer Type].

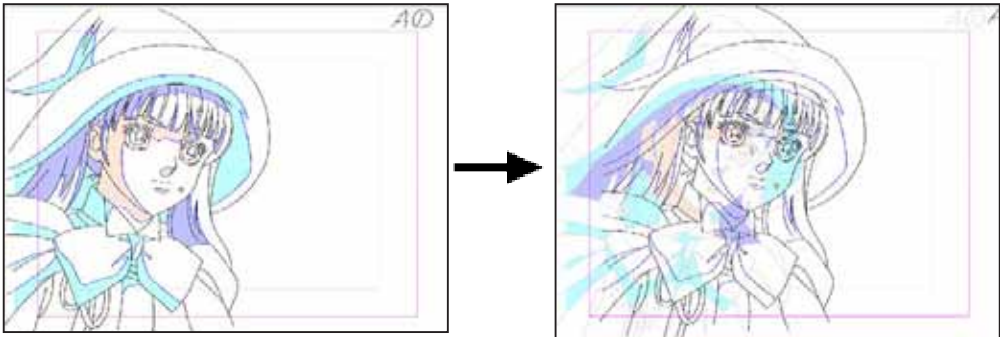


3. Completion

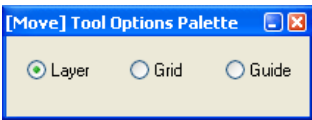
Click [OK] to convert the layer. The converted layer is added to the [Layer Palette].

Move tool  

The [Move] tool on the [Tool Palette] allows you to scroll only a selected layer by dragging.



Move tool options palette

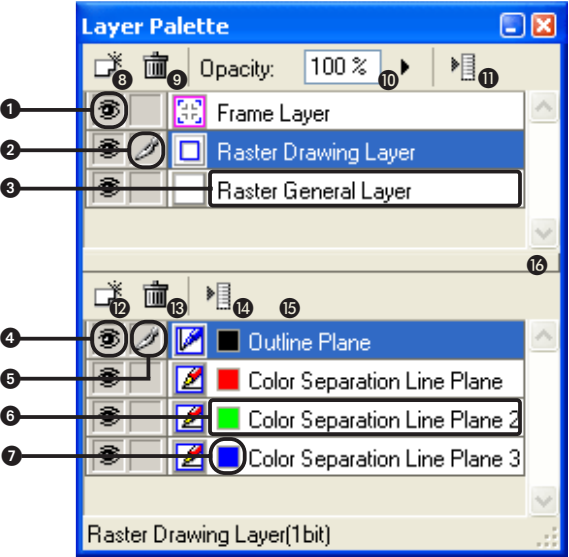


- **[Layer]**  
Moves the layer.
- **[Grid]**  
Moves the grids.
- **[Guide]**  
Moves the guide.

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Name of the Layer Palette parts

The [Layer Palette] opens when you select [Layer Palette] from the [Window] menu.



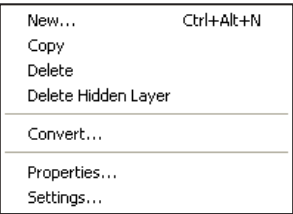
\* The view items below are items toggled with a mouse click.

- ❶ **[Show/Hide Layer] icon**  
The layer is visible when the icon is visible.
- ❷ **[Drawing Permission] icon**  
Drawing/editing on the layer is possible when the icon is visible. Select clicking this icon to select multiple layers simultaneously.
- ❸ **[Layer Name] field**  
Click to select. The layer is selected (active) when the field is shown in blue.
- ❹ **[Show/Hide Plane] icon**  
The plane is visible when the icon is visible.
- ❺ **[Drawing Permission] icon**  
Drawing/editing on the plane is possible when the icon is visible. Select clicking this icon to select multiple planes simultaneously.
- ❻ **[Plane Name] field**  
Click to select. The layer is selected (active) when the field is shown in blue.  
Some planes show the dialog box that allows you to edit or reconfigure the settings when double clicked.
- ❼ **[Plane Color] button**  
Clicking the button shows a dialog box that allows you to change the plane color (color of the plane).

- ❸ **[Create New Layer] button**  
Clicking the button shows the [New Layer] dialog box that allows you to create a new layer.
- ❹ **[Delete Layer] button**  
Deletes the selected layer.
- ❺ **[Opacity] field**  
This field allows you to adjust the opacity of the shown image by direct input or slider operation.
- ❾ **[Show Layer Menu] button**  
Shows the layer menu.
- ❿ **[Create New Plane] button**  
Clicking the button shows the [New Plane] dialog box that allows you to create a new plane.
- ⓫ **[Delete Plane] button**  
Deletes the selected plane.
- ⓬ **[Edit Alpha] button (Only TraceMan HD and PaintMan HD)**  
Shows the [Raster Plane] alpha channel.
- ⓭ **[Show Plane Menu] button**  
Shows the plane menu.
- ⓮ **Palette split bar**  
The split bar allows you to change the sizes of the layer and plane panes in the [Layer Palette]. To change the sizes, put the mouse pointer on the split bar and slide it up/down.

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Layer menu and Plane menu



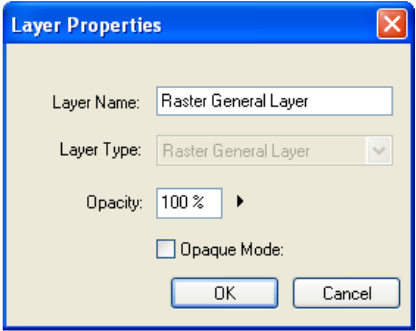
Layer menu



Plane menu  
(Screen image of TraceMan HD or PaintMan HD)

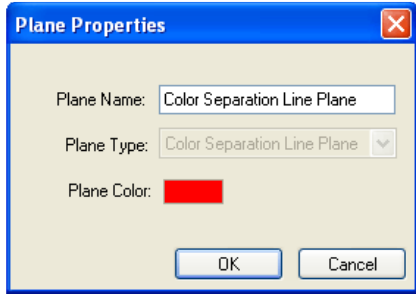
- **[New...]**  
Shows the [New Layer/Plane] dialog box that allows you to create a new layer or plane.
- **[Copy]**  
Allows you to make a copy of the selected layer/plane.
- **[Delete]**  
Allows you to delete the selected layer/plane.
- **[Delete Hidden Layer]**  
Allows you to delete a layer whose [Show/Hide] icon is turned off.
- **[Convert...]**  
Opens the [Convert Layer] dialog box that allows you to convert a layer/plane.
- **[Edit Alpha] (Only TraceMan HD and PaintMan HD)**  
Allows you to edit the [Raster Plane] alpha channel.
- **[Property...]**  
Opens the [Layer/Plane Properties] dialog box.
- **[Settings...]**  
Opens the settings dialog box when either [Frame Layer], [Vanishing Point Layer], or [Adjustment Layer] (only TraceMan HD and PaintMan HD) is selected.

Layer Properties dialog box



- **[Layer Name]**  
Allows you to change the layer name.
- **[Layer Type]**  
Shows the layer type.
- **[Opacity]**  
Allows you to change the layer opacity.
- **[Opaque Mode] (Only raster general layer)**  
Turns off the [Opacity].

Plane Properties dialog box



- **[Plane Name]**  
Allows you to change the plane name.
- **[Plane Type]**  
Shows the plane type.
- **[Plane Color] (Only some planes)**  
Allows you to change the plane color using the [Color Settings] or [Color] dialog box.

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# List of layers and planes

S: STYLOS HD T: TraceMan HD P: PaintMan HD

## Drawing-related layers

| Layer/Plane                    | S | T | P | Description                                                 |
|--------------------------------|---|---|---|-------------------------------------------------------------|
| <b>Raster sketch layer</b>     | ● | × | × | <b>Layer for drawing sketches</b>                           |
| Raster plane                   | ● | × | × | Plane for drawing lines in raster format                    |
| <b>Raster drawing layer</b>    | ● | × | × | <b>Layer for raster-based drawing</b>                       |
| Outline plane                  | ● | × | × | Plane for saving outlines                                   |
| Color separation line plane    | ● | × | × | Plane for saving color separation lines                     |
| <b>Vector drawing layer</b>    | ● | × | × | <b>Layer for vector-based drawing</b>                       |
| Outline plane                  | ● | × | × | Plane for saving outlines                                   |
| Color separation line plane    | ● | × | × | Plane for saving color separation lines                     |
| Additional line plane          | ● | × | × | Plane for drawing lines in raster format                    |
| <b>Raster correction layer</b> | ● | × | × | <b>Layer for making corrections (used in drawing check)</b> |
| Outline plane                  | ● | × | × | Plane for saving outlines                                   |
| Color separation line plane    | ● | × | × | Plane for saving color separation lines                     |
| <b>Vector correction layer</b> | ● | × | × | <b>Layer for making corrections (used in drawing check)</b> |
| Outline plane                  | ● | × | × | Plane for saving outlines                                   |
| Color separation line plane    | ● | × | × | Plane for saving color separation lines                     |
| Additional line plane          | ● | × | × | Plane for drawing lines in raster format                    |

## Painting and BG-related layers

| Layer/Plane                 | S | T | P | Description                                                                     |
|-----------------------------|---|---|---|---------------------------------------------------------------------------------|
| <b>Mono paint layer</b>     | × | ● | ● | <b>Layer for painting in black and white</b>                                    |
| Outline plane               | × | ● | ● | Plane for protecting outlines                                                   |
| Painting plane              | × | ● | ● | Plane for performing the painting                                               |
| Raster plane                | × | ● | ● | Plane that can be used for special effects                                      |
| <b>Gray paint layer</b>     | × | ● | ● | <b>Layer for painting. Outlines are expressed with grayscale in this layer.</b> |
| Outline plane               | × | ● | ● | Plane for protecting outlines (keep the grayscale)                              |
| Painting plane              | × | ● | ● | Plane for performing the painting                                               |
| Raster plane                | × | ● | ● | Plane that can be used for special effects                                      |
| <b>Vector paint layer</b>   | × | ● | ● | <b>Layer for vector-based painting</b>                                          |
| Outline plane               | × | ● | ● | Plane for protecting outlines                                                   |
| Color separation line plane | × | ● | ● | Plane for protecting color separation lines                                     |
| Coloring plane              | × | ● | ● | Plane for performing the painting                                               |
| Raster plane                | × | ● | ● | Plane that can be used for special effects                                      |
| <b>Raster general layer</b> | ● | ● | ● | <b>Layer that can be used for BG and/or special effects</b>                     |
| Raster plane                | ● | ● | ● | Plane that can be used for BG and /or special effects                           |
| Alpha channel               | × | ● | ● | Channel for specifying transparency                                             |

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Non-image related layers

| Layer/Plane               | S | T | P | Description                                                |
|---------------------------|---|---|---|------------------------------------------------------------|
| Shadow markup layer       | ● | ● | ● | Layer for performing shadow markup                         |
| Border line plane         | ● | ● | ● | Equivalent of the outline plane in shadow markup           |
| Shadow markup plane       | ● | ● | ● | Equivalent of the painting plane in shadow markup          |
| Direction layer           | ● | ● | ● | Layer where it is possible to enter handwritten directions |
| Raster plane              | ● | ● | ● |                                                            |
| Direction text layer      | ● | ● | ● | Layer for entering direction-related texts                 |
| Text plane                | ● | ● | ● |                                                            |
| Text layer                | ● | ● | ● | Layer for entering texts                                   |
| Text plane                | ● | ● | ● |                                                            |
| Frame layer               | ● | ● | ● | Layer for saving frames                                    |
| Anchor frame plane        | ● | ● | ● | Plane for configuring an anchor frame                      |
| Shooting frame plane      | ● | ● | ● | Plane for configuring a shooting frame                     |
| Vanishing point layer     | ● | ● | ● | Layer for showing the vanishing point                      |
| Vanishing point plane     | ● | ● | ● |                                                            |
| Selection layer           | ● | ● | ● | Layer for saving a selection                               |
| Selection plane           | ● | ● | ● |                                                            |
| Adjustment Layer          | × | ● | ● | Corrected image converted into layer                       |
| Level adjust plane        | × | ● | ● | Plane for configuring the level adjust                     |
| Tone curve plane          | × | ● | ● | Plane for configuring the tone curve                       |
| Brightness/Contrast plane | × | ● | ● | Plane for configuring the brightness and/or contrast       |

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RETAS!PRO

# Chapter 8

## Scan

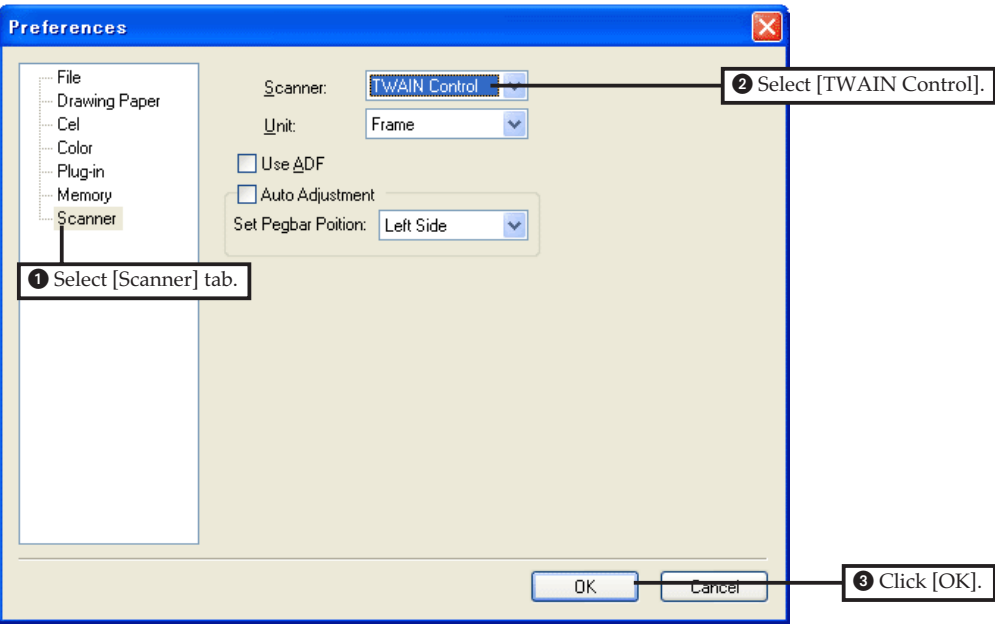
# Preparing a scan

## Configuring the scanner settings

The procedure for configuring the connected scanner is as follows.

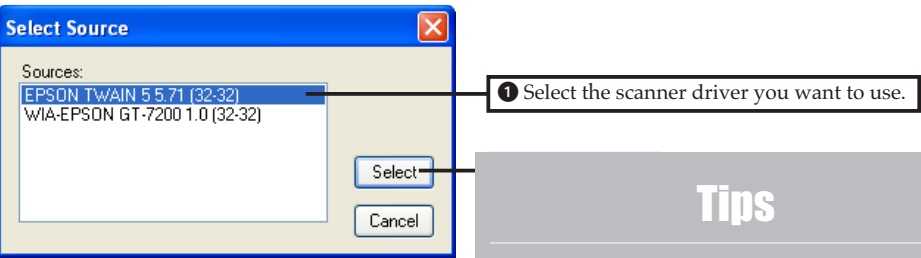
### 1. Select the scanner control method.

Select [Settings] → [Preferences...] from the [Edit] menu, or [Preferences] from the application menu. The [Preferences] dialog box appears.



### 2. Select the scanner driver.

Select [Select TWAIN\_32 Compatible Device...] (Windows) or [Select TWAIN Device...] (Macintosh) from the [Scan] menu to open the [Select Source] dialog box.

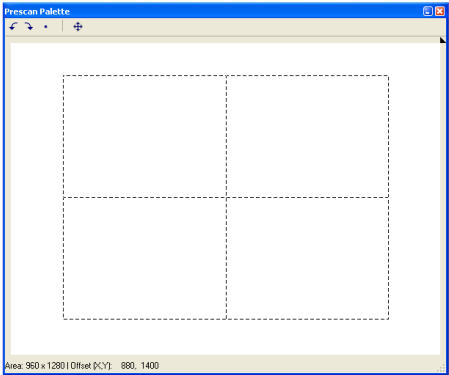
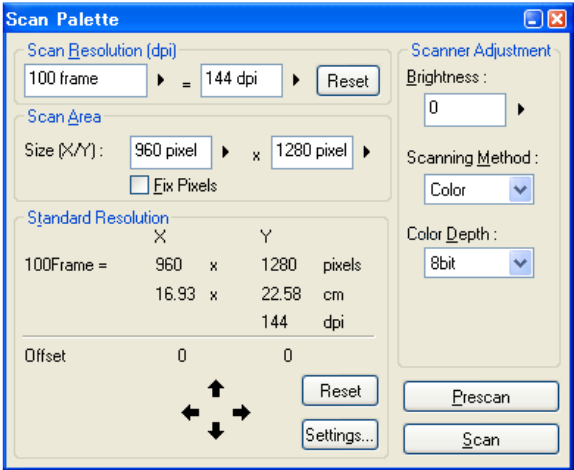


### Tips

- Scanner setup is not necessary at subsequent startups as settings are saved.

### 3. Open the palettes.

Select [Scan Palette] and [Prescan Palette] from the [Window] menu. Both [Scan Palette] and [Prescan Palette] open.



### Tips

- If the scanner is not connected correctly, a warning dialog box appears instead of the palettes. If so, quit TraceMan HD and check whether the scanner is powered on and/or connected correctly.
- If the scanner head is locked, an error message appears. Make sure it is unlocked, especially if the scanner is new.

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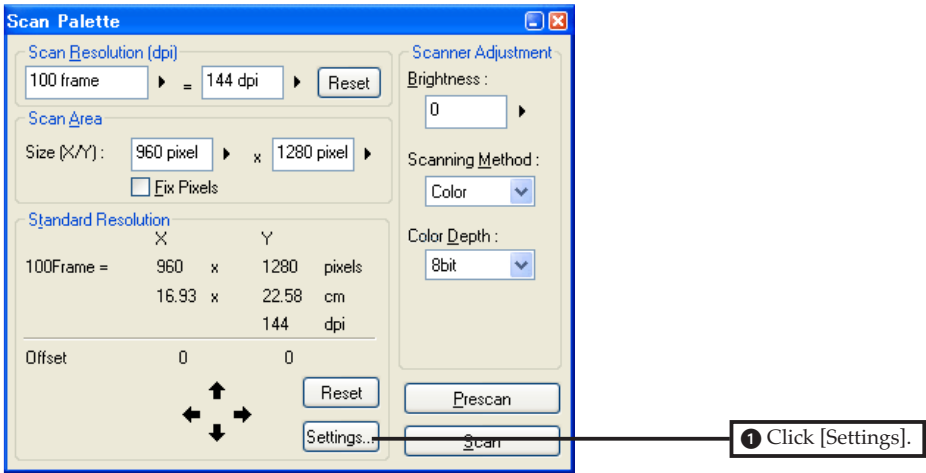


Configuring the 100Frame (standard resolution) settings

The procedure for configuring the standard resolution for [100Frame] on the [Scan Palette] is as follows.

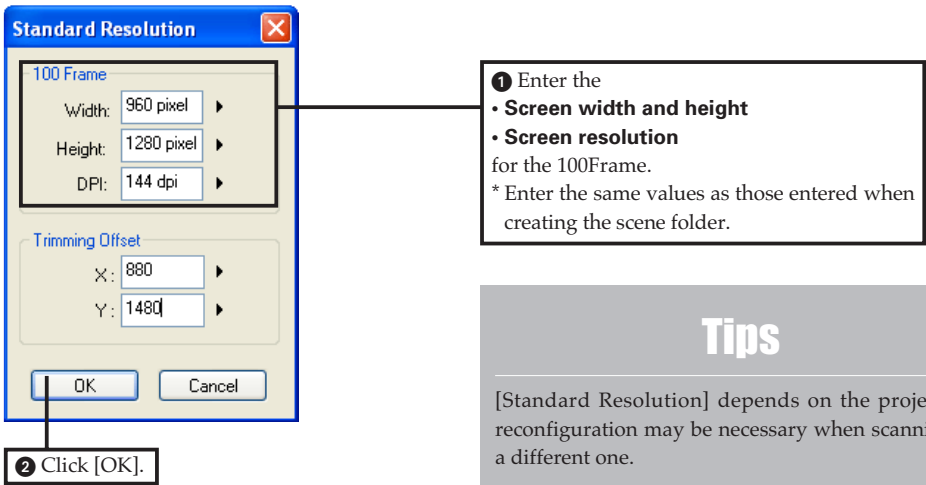
1. Open the Scan palette.

Open the [Scan Palette].



2. Configure the Standard Resolution dialog box settings.

The [Standard Resolution] dialog box appears.

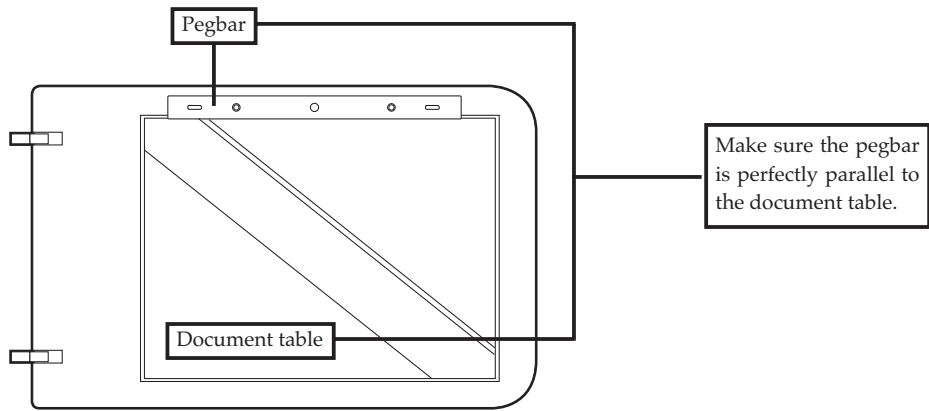


Tips

[Standard Resolution] depends on the project. So, reconfiguration may be necessary when scanning for a different one.

Mounting the pegbar

Fix the pegbar by the side of the scanner document table with adhesive tape.



Tips

Locate the best place to fix the pegbar in your scanner so that its cover can close comfortably.

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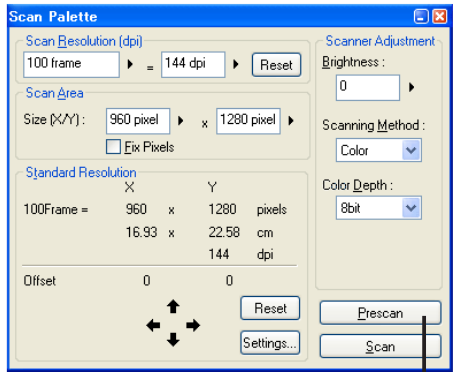
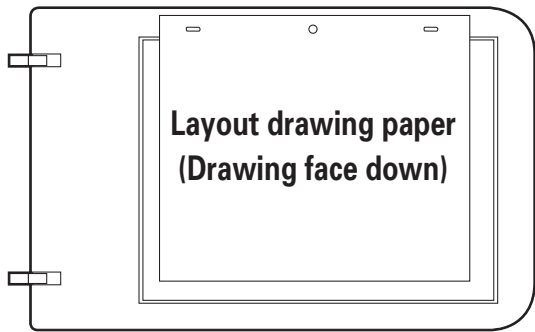
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Adjusting the scan position

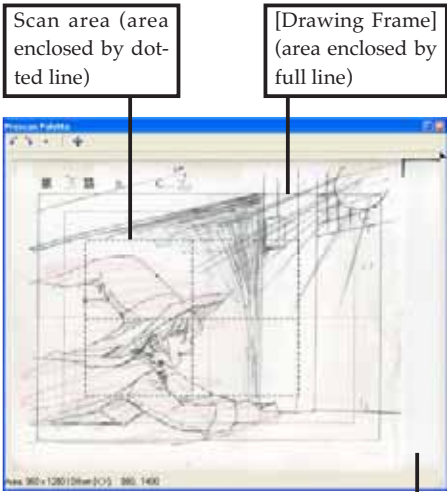
The procedure for loading the layout drawing paper with the drawing frame printed on it, and configuring the scan area is as follows.

1. Prescan the layout drawing paper.

Set the layout drawing paper in the scanner using the peg holes as reference.



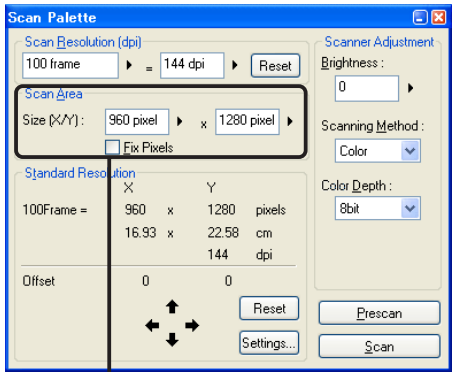
Click the [Prescan] button on the [Scan Palette].



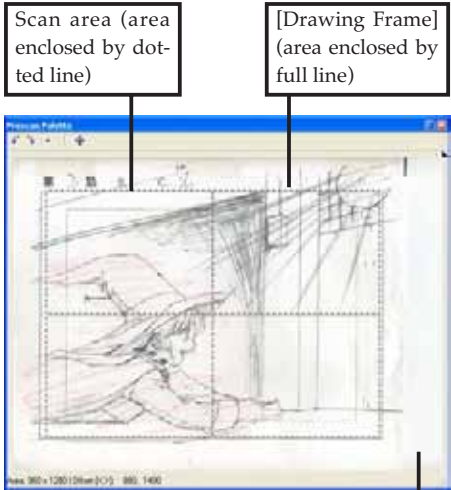
Layout appears on the [Prescan Palette].

2. Configure the scan area settings.

Configure the scan area settings using the [Scan Palette].



Enter the scan area size in the [Size] field.



Adjust the size of the dotted line rectangle to that of the full line rectangle on the [Prescan Palette].

Tips

Adjust the scan area as necessary when you need to scan an inbetween on a large cel, for example. The description above is a positioning example for a 100Frame or fixed size scene.

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# Scan

## Scanning inbetweens

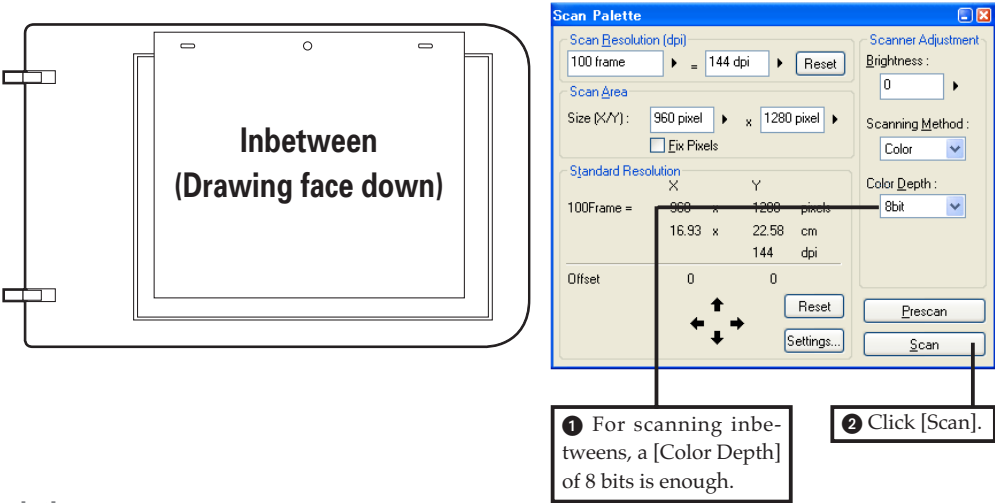
The procedure for scanning the inbetweens once you have configured the scan area settings is as follows.

1. Set the inbetween.

Set the inbetween on the scanner document table.

2. Scan.

Open the [Scan Palette].



3. Completion

Scan is executed.



## Scanning BGs/overlays (48 bits)

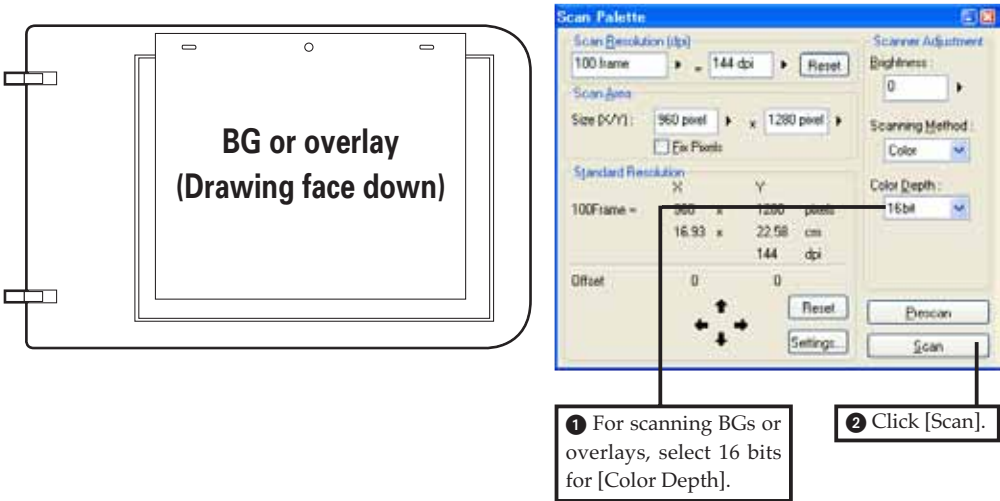
The procedure for scanning BGs/overlays is as indicated below. Scanning with a color depth of 48 bits (16 bits/channel) is recommended to keep image quality deterioration at tone adjustment to the minimum.

1. Set the BG/overlay.

Set the BG or the overlay on the scanner document table.

2. Scan.

Open the [Scan Palette].



3. Completion

Scan is executed.



### Tips

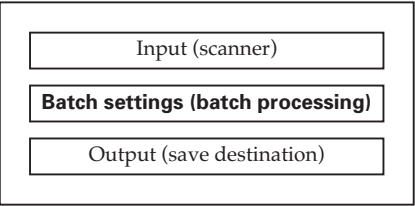
48-bit scanning is ideal for scanning BG images with large amounts of information. For inbetweens, an 8-bit scanning is normally enough.

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Auto scan

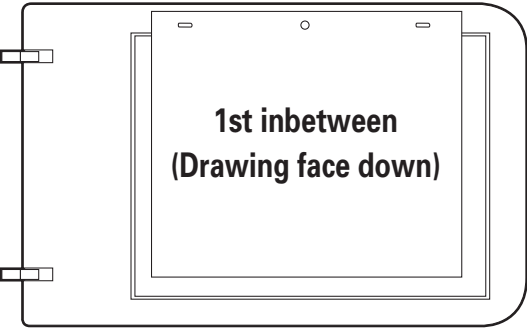
Auto scan is a function that allows you to scan inbetweens continuously using the same scan area with a simple operation and sort the images to the corresponding folders based on the layer information. For executing an auto scan, execute the procedure below after "Adjusting the scan position".

Specify the input and the output then the batch processing items you want to have executed.



1. Set the 1st inbetween.

Set the inbetween on the scanner document table. (For example, No. 1 in A Cel)

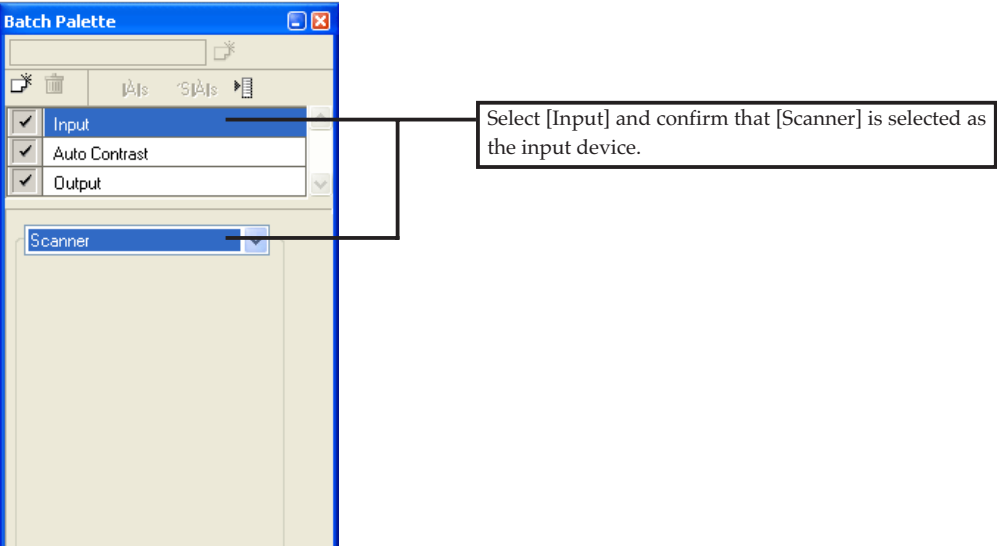


2. Select Auto Scan.

Select [Auto Scan...] from the [Scan] menu.

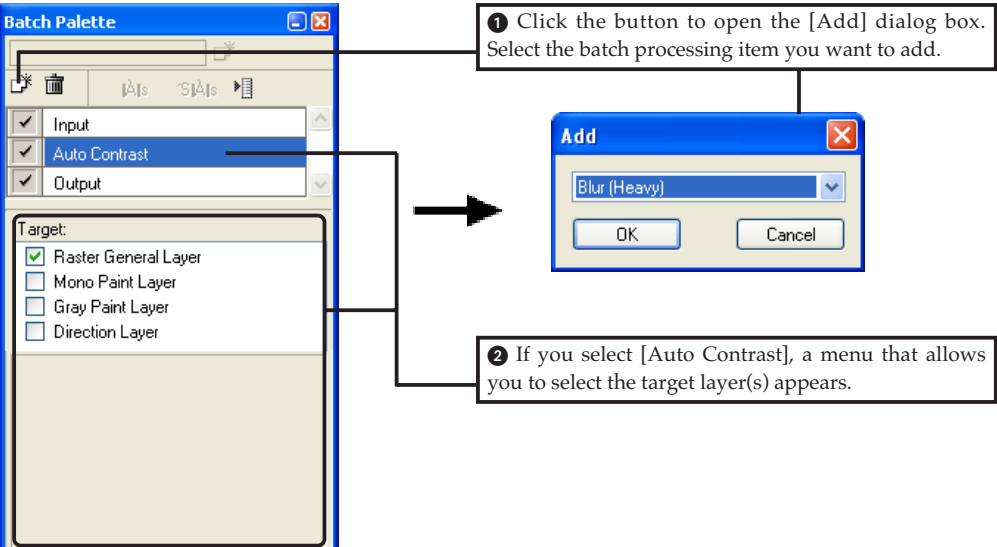
3. Specify the input.

The [Batch Palette] opens. Select [Input] and specify the input device.



4. Configure the batch settings.

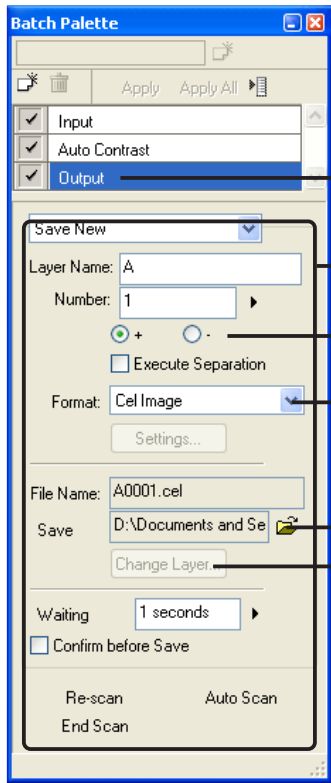
Specify the batch processing items you want to have executed on the scanned images.



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5. Specify the output.

Specify the data save destination.



**1** If you select [Output], a save menu appears.

**2** Specify the save folder. Click the button to open the Select Folder dialog box. There, specify the scene folder you have created.

**3** Specify the save layer (cel folder). Click the button to open the Layer Selection dialog box. There, select the destination layer. \*

**4** Specify the save format. Cel image [cel format] is recommended unless you want to open the file with another software program.

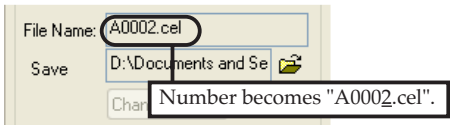
**5** Specify [+] (increment) when scanning starts from inbetween number "1".

6. Scan.

Click [Auto Scan] on the [Batch Palette]. The 1st inbetween is scanned.

7. Scan the next cel.

When scanning of the 1st inbetween is complete, the [Batch Palette] appears again. Confirm that the number is incremented in 1.

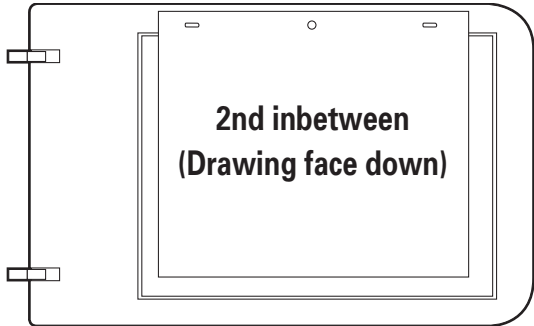


Tips

\* The [Change Layer] button cannot be used when the output destination is not a scene folder created with RETAS!PRO HD.

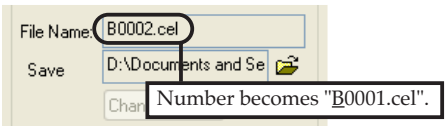
8. Change the inbetween to the 2nd one.

Change the inbetween and click [Auto Scan] on the [Scan Palette]. The auto scan continues. Repeat steps 6 to 8 until the last inbetween.



9. Scan the 2nd layer.

Once A Cel scanning is complete, click the [Change Layer] button and change the layer name to that of the next one (B Cel, for example).



10. Change the inbetween.

Change the inbetween and click [Auto Scan] on the [Scan Palette]. The auto scan continues.

11. Completion

When you finished all the scans, click [End Scan] on the [Batch Palette].

Tips

If you changed the order in which the inbetweens must be scanned by mistake, correct the order and click [Re-scan] on the [Batch Palette] to scan again.

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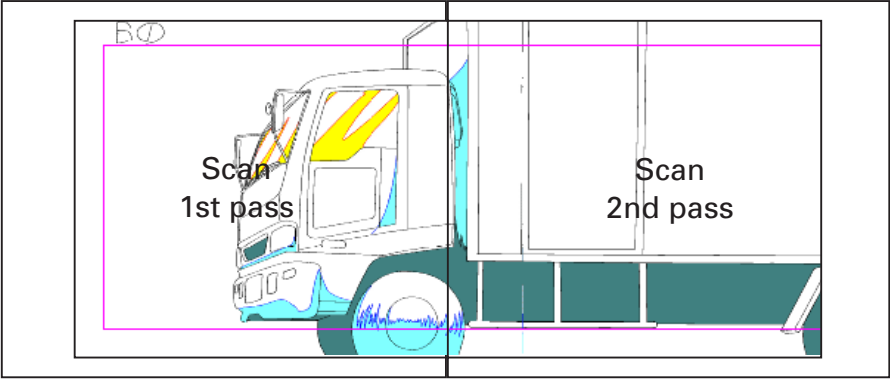
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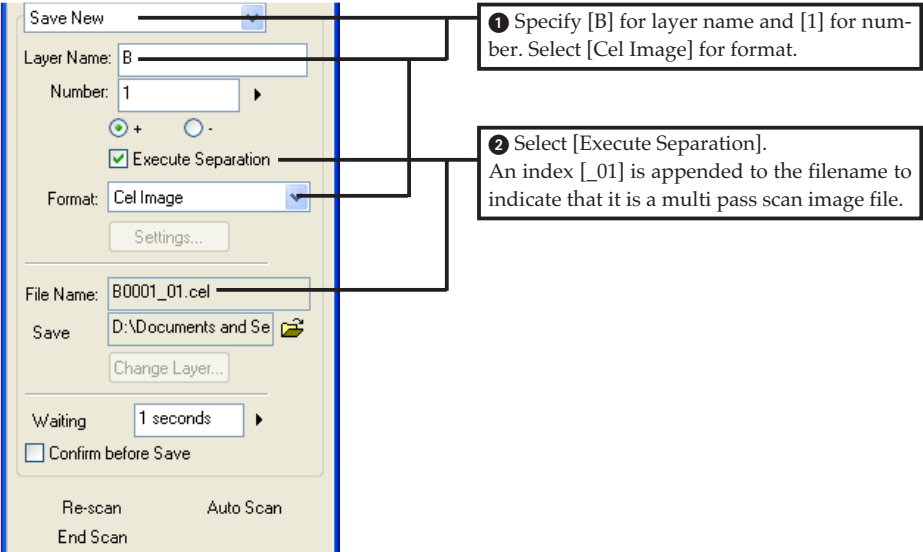
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Multiple pass scanning

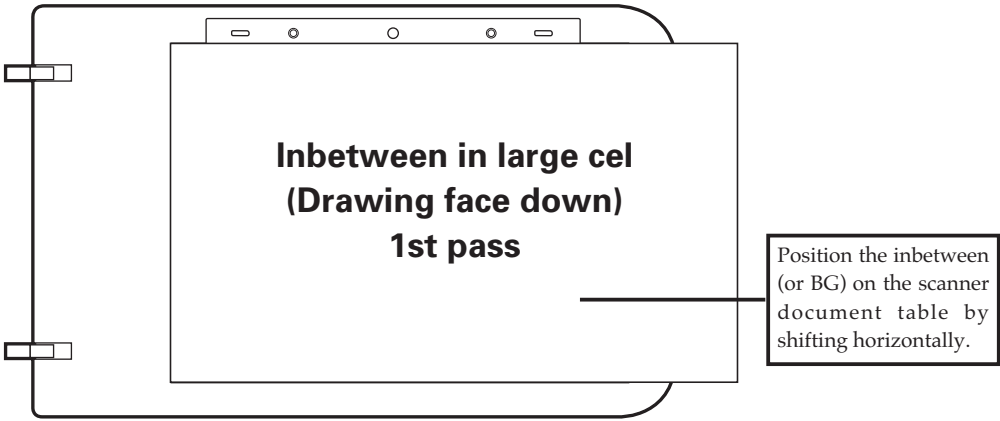
The procedure for executing a multiple pass scanning because the material cannot be scanned in one pass such as a large cel or BG is as follows.  
Example: Two pass scanning of B Cel (large cel), one for the right portion and the second for the left portion.



1. Open the Batch Palette.



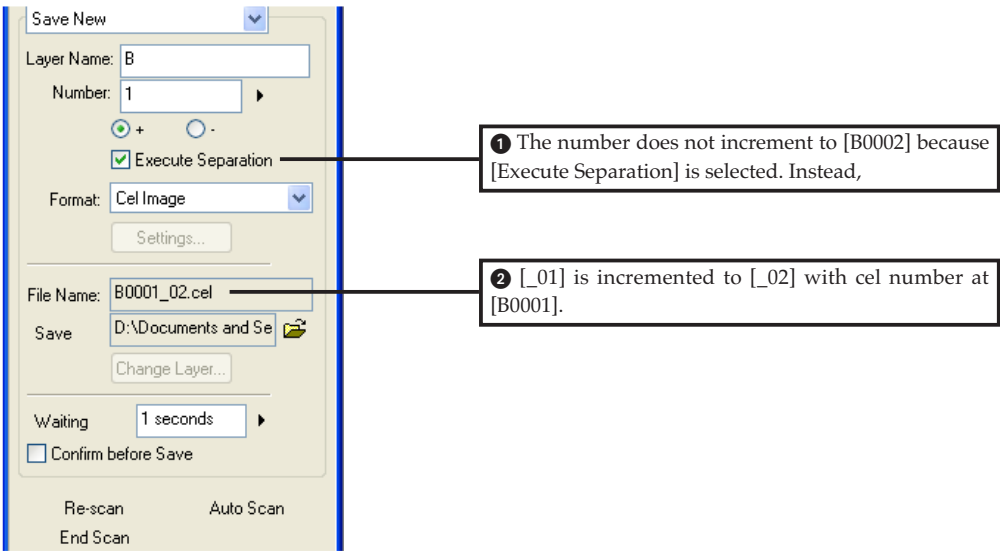
2. Set the original.



3. Execute the 1st pass.

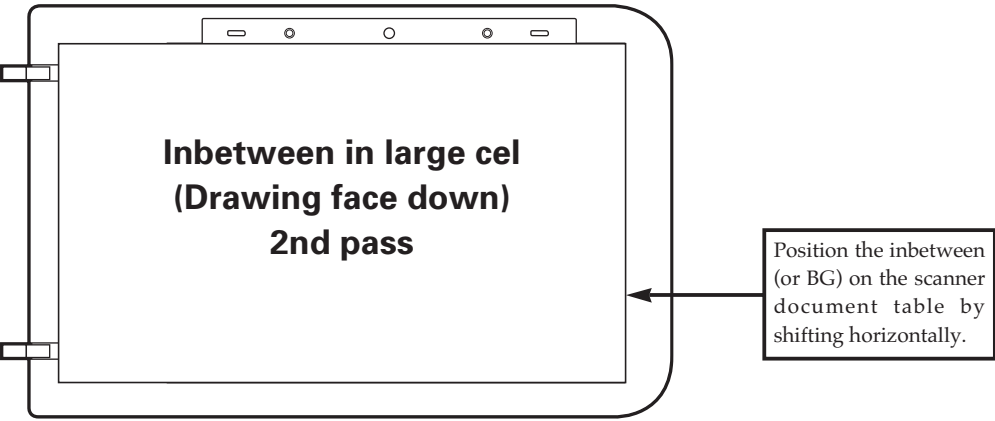
Click [Auto Scan]. The 1st portion is scanned and saved in the "B" folder.

4. Re-open the Batch Palette.



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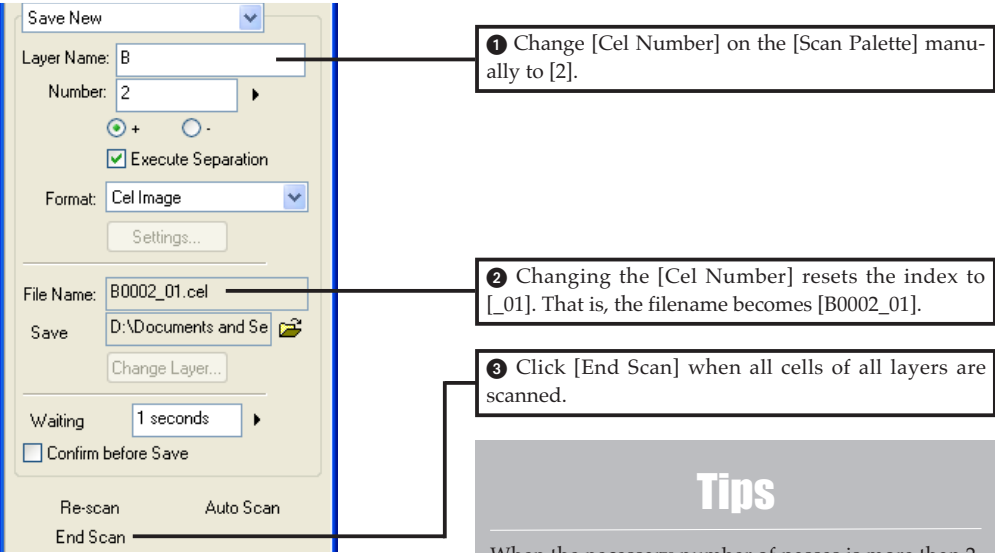
5. Set the original.



6. Execute the 2nd pass.

2 Click [Auto Scan]. TraceMan executes the scan for the "B0001\_02.cel" file.

7. Scan the subsequent cels.

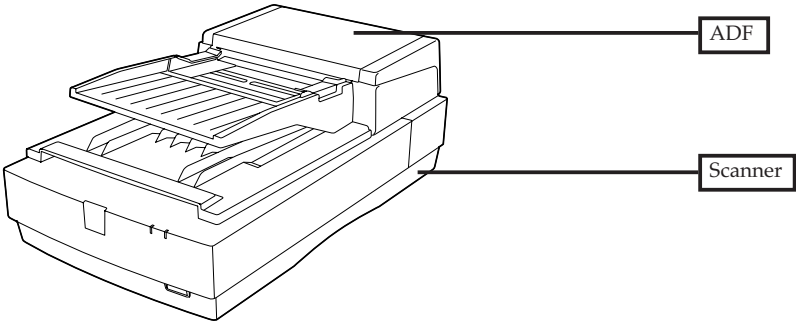


Tips

When the necessary number of passes is more than 2, repeat steps 4 to 6 of the procedure above.

Auto Scan with ADF

ADF which stands for Automatic Document Feeder is a device that if mounted on the scanner saves you the need to set the inbetween on the scanner document table each time to execute an auto scan.



Supported models

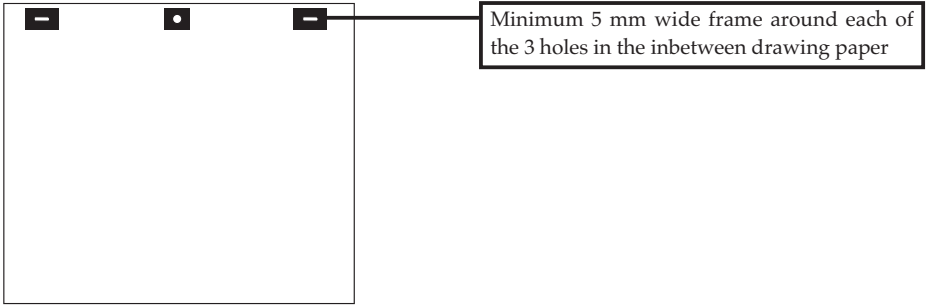
Please see the "Operation Confirmed Scanners" sheet attached to this product or the RETAS!PRO website.

ADF tray capacity

The number of drawing papers you can set at a time is approximately 40. Setting more increases the possibility of misfeed which is more inconvenient than setting the sheets manually.

ADF compatible drawing paper

For TraceMan HD to recognize an image on a drawing paper scanned using ADF, it is necessary that the peg holes have a black frame.



Tips

Some ADF models handle smaller sheets and cannot load standard size drawing papers. If so, look for a drawing paper of smaller size.

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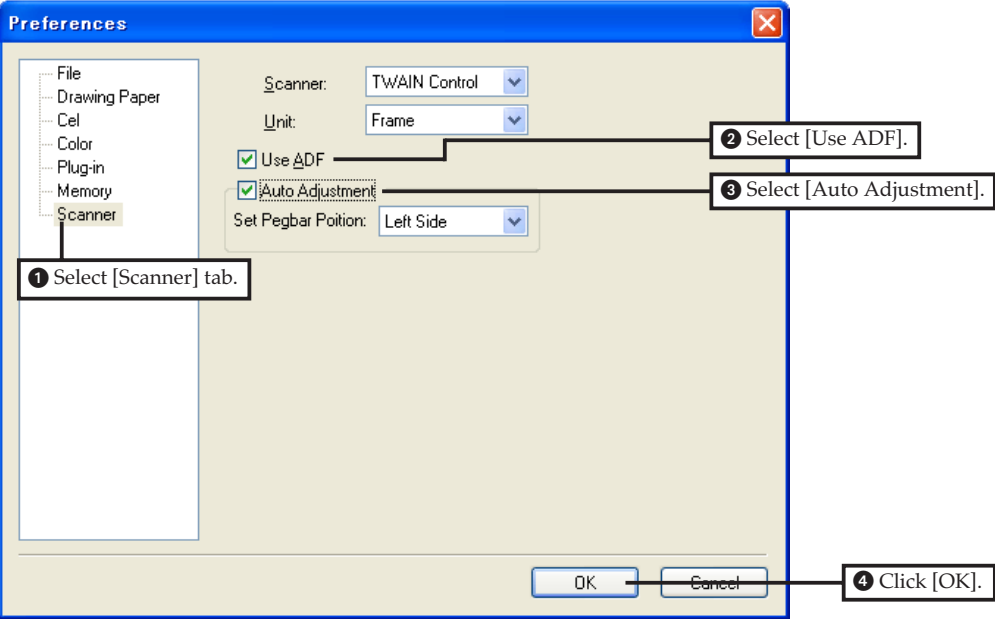
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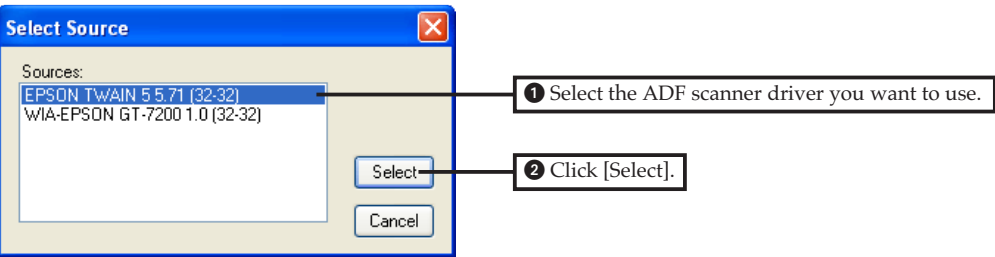
1. Configure the Preferences.

Select [Settings] → [Preferences...] from the [Edit] menu or [Preferences] from the application menu. The [Preferences] dialog box appears.



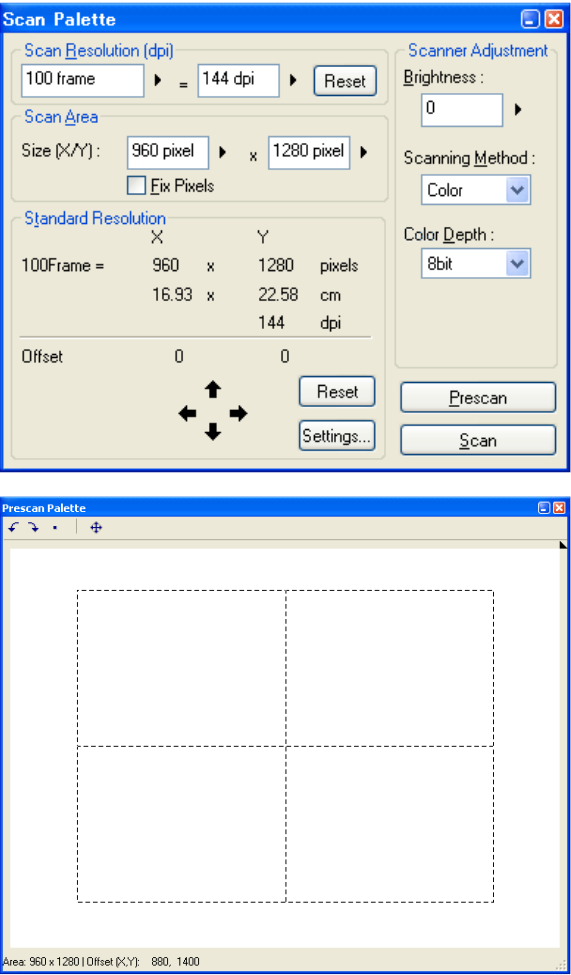
2. Select the scanner driver.

Select [Select TWAIN\_32 Compatible Device...] (Windows) or [Select TWAIN Device] (Macintosh) from the [Scan] menu to open the [Select Source] dialog box.



3. Open the palettes.

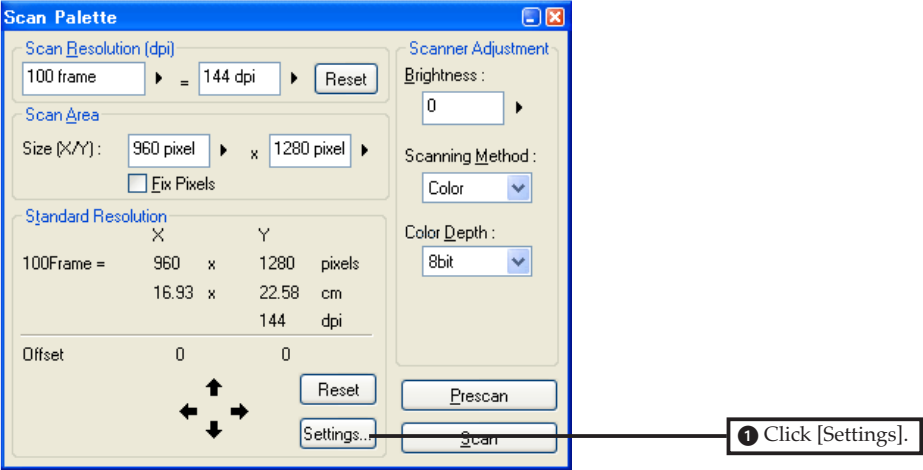
Select [Scan Palette] and [Prescan Palette] from the [Window] menu. Both [Scan Palette] and [Prescan Palette] open.



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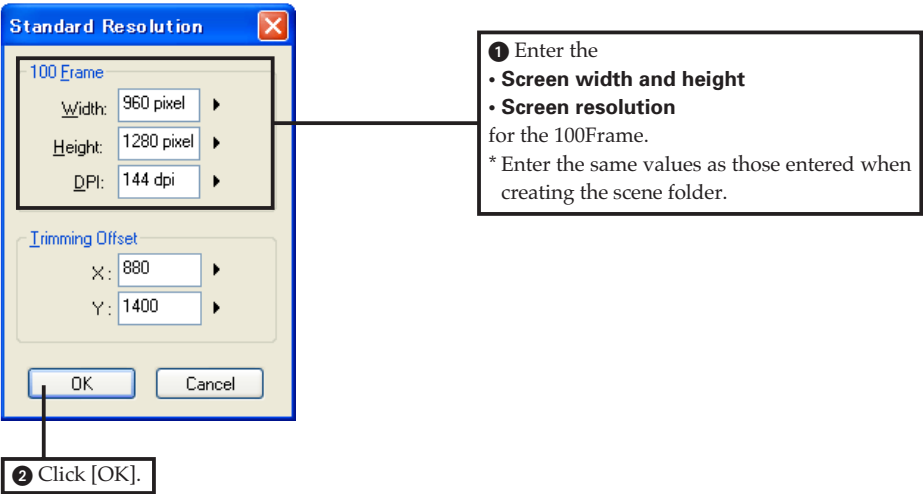
4. Open the Scan palette.

Open the [Scan Palette].



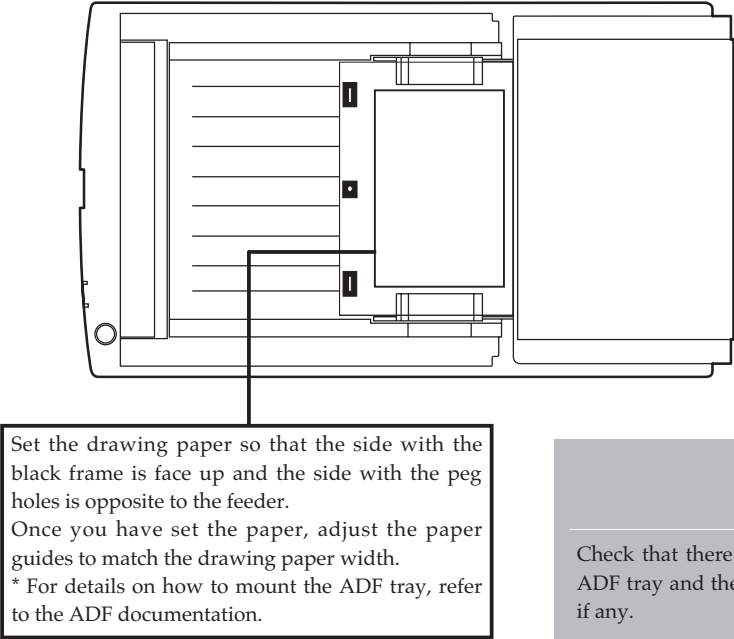
5. Configure the Standard Resolution dialog box settings.

The [Standard Resolution] dialog box appears.



6. Set the layout drawing paper.

Drawing paper for RETAS!PRO is not necessary if you are not using ADF.



Tips

Check that there is no paper jammed between the ADF tray and the scanner document table. Remove if any.

7. Configure the reference pegbar position.

Once you have finished configuring the scan resolution with the [Scan Palette], select [Set Pegbar Position] from the [Scan] menu. The first sheet is loaded. On the [Prescan Palette], the whole document table image appears. TraceMan HD detects the peg holes on the layout drawing paper automatically and saves it as reference pegbar position for the subsequent auto scans.

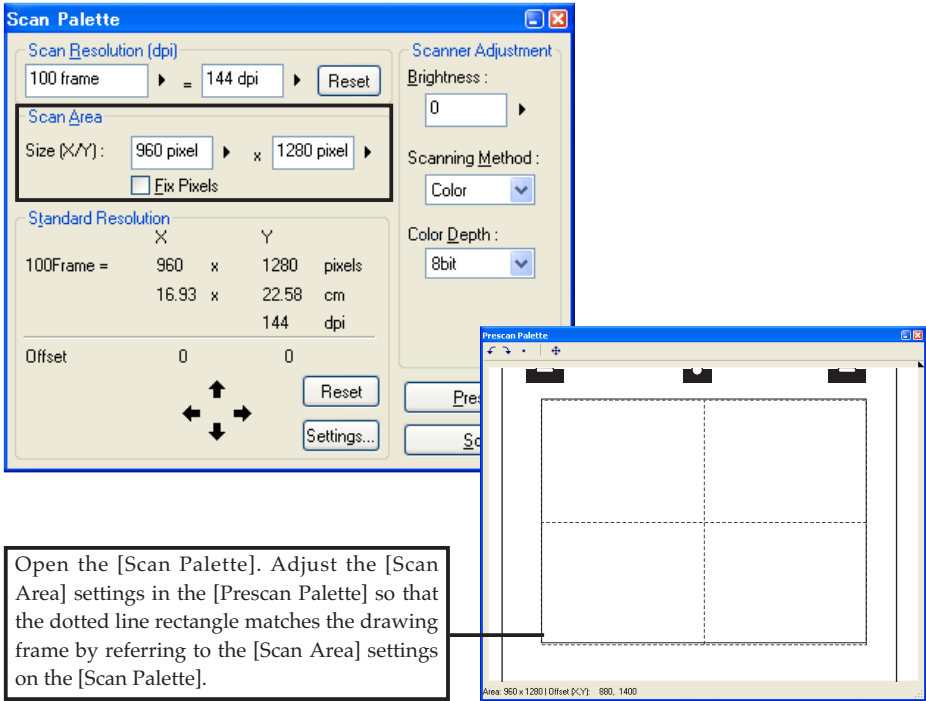
Tips

No message is output upon peg hole detection. That is, detection is successful if there are no error messages output. If a warning dialog box appears, that means TraceMan HD failed to detect the peg holes. Check whether "the peg holes have the black frame as specified", or whether "the sheet was set correctly in the ADF tray". Always execute "Set Pegbar Position" after specifying "scan resolution". Whenever you change the resolution, always reconfigure the reference pegbar position settings.

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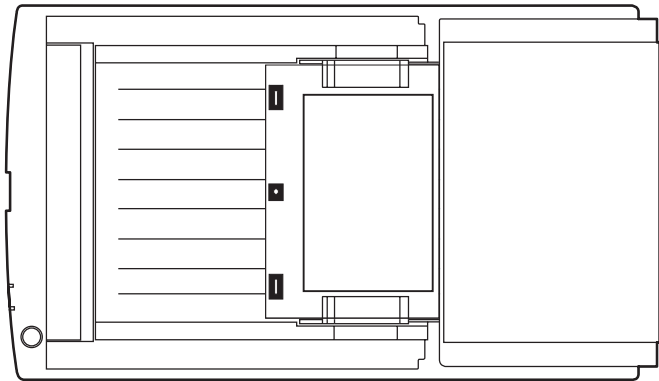
8. Configure the scan area settings.

Configure the scan area settings using the [Scan Palette] and [Prescan Palette].



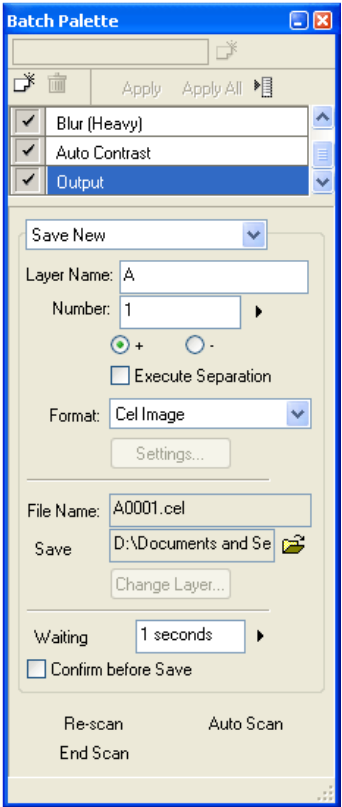
9. Set the inbetween.

Set the inbetween to scan in the ADF tray in the same way as you did with the layout drawing paper.



10. Auto scan.

Select [Auto Scan...] from the [Scan] menu. The [Batch Palette] appears. Configure the settings in the same way as you do for an auto scan without ADF and click [Auto Scan]. The inbetween is set automatically to the scanner document table and scanned. When scan is finished, the sheet is ejected and the next one set to the scanner document table automatically.



Tips

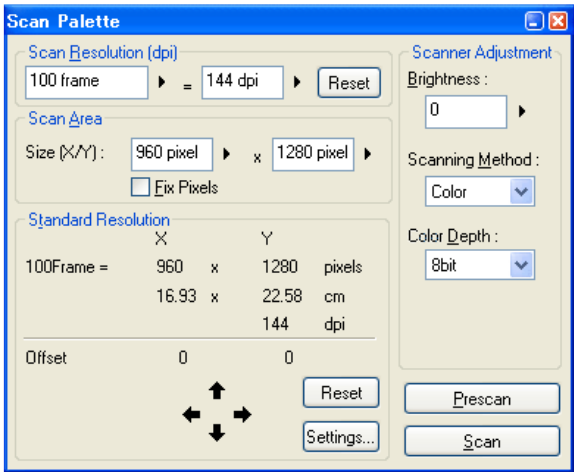
If the contrast in the scanned image is extremely low or high, TraceMan HD fails to detect the peg holes. For adjusting the contrast, use the [Brightness] control on the [Scan Palette].

11. To continue scanning

When the ADF tray becomes empty, the [Batch Palette] appears again. To continue scanning, load the subsequent inbetweens to the ADF tray by following the procedure described in [6. Set the layout drawing paper.] and click [OK]. To stop scanning, click [End Scan].

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Scan Palette



A palette for configuring and operating the scanner.

[Scan Resolution (dpi)]

Gives the size or resolution at which a frame will be scanned.

- **[n]frame**  
Allows you to enter the frame size at the closest point of shooting. The necessary resolution (dpi) will be calculated automatically.
- **[n]dpi**  
Allows you to enter the size at the closest point of shooting. The equivalence in frames will be calculated automatically.
- **[Reset] button**  
The [n] frame and [n] dpi values under "Scan Resolution (dpi)" are reset to the default values.

[Scan Area]

Shows and allows you to configure the scan area settings.

- **[Size] (X/Y)**  
Shows and allows you to configure the scan area as a function of the length in the X and Y directions. You can adjust the scan area entering a value numerically. The values are linked to the [Scan Area] (area enclosed by dotted line) on the [Prescan Palette].
- **[Fix Pixels]**  
Selecting this check box fixes the number of pixels in the scan area so that if you adjust the scan area size, the scan resolution is adjusted accordingly.

[Standard Resolution]

- **[100Frame] area**  
Shows the "number of pixels in the scanned image" (pixels), the "size of the drawing paper" (cm), and the "resolution of the scanned image" (dpi) for the 100Field.

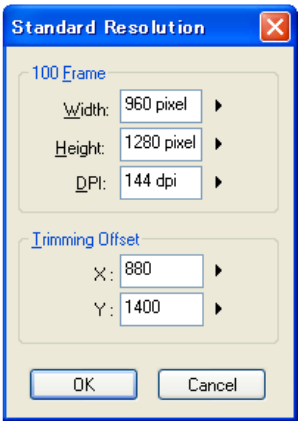
- **[Offset] area**  
Shows the offset (distance from the origin) of the scan area.
- **[Reset] button**  
Resets the "Scan Resolution (dpi)" for the [Scan Area] to the value specified in the [Standard Resolution] dialog box.
- **[Settings...] button**  
Opens the [Standard Resolution] dialog box.

[Scanner Adjustment]

- **[Brightness]**  
Adjusts the brightness for the scan.
- **[Scanning Method]**  
Originals can be scanned in [Color] or [Gray] (grayscale). When there are no color separation lines in the in-between, select the latter mode to scan more quickly.
- **[Color Depth] (channel)**  
Allows you to specify the color depth for the scanning from 8 bits or 16 bits per channel.

- **[Prescan] button**  
Executes the prescan. Executing a prescan shows the whole scanner document table image in the prescan area.
- **[Scan] button**  
Executes the scan. Executing a scan creates a new [Cel] window with the scanned image.

Standard Resolution dialog box

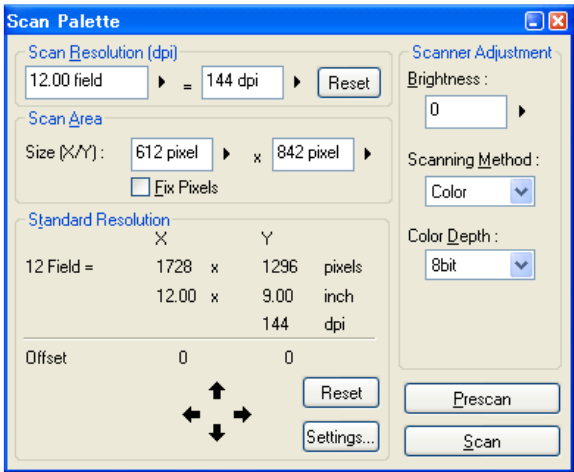


- [100Frame]**  
Allows you to specify the [Width] and [Height] in number of pixels, and the [DPI] for the 100Frame.

- [Trimming Offset]**  
Allows you to specify the [X], [Y] values for the scan area offset.

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Scan Palette (12 Field)



A palette for configuring and operating the scanner.

[Scan Resolution (dpi)]

Gives the size or resolution at which a frame will be scanned.

- **[n] frame**  
Allows you to specify the frame size at the closest point of shooting. The necessary resolution (dpi) will be calculated automatically.
- **[n] dpi**  
Allows you to specify the size at the closest point of shooting. The equivalence in frames will be calculated automatically.
- **[Reset] button**  
The [n] frame and [n] dpi values under "Scan Resolution (dpi)" are reset to the default values.

[Scan Area]

Shows and allows you to configure the scan area settings.

- **[Size] (X/Y)**  
Shows and allows you to configure the scan area as a function of the length in the X and Y directions. You can adjust the scan area entering a value numerically. The values are linked to the [Scan Area] (area enclosed by dotted line) on the [Prescan Palette].
- **[Fix Pixels]**  
Selecting this check box fixes the number of pixels in the scan area so that if you adjust the scan area size, the scan resolution is adjusted accordingly.

[Standard Resolution]

- **[12 Field] area**  
Shows the "number of pixels in the scanned image" (pixels), the "size of the drawing paper" (inch), and the "resolution of the scanned image" (dpi) for the 12 Field.

- **[Offset] area**  
Shows the offset (distance from the origin) for the scan area.
- **[Reset] button**  
Resets the "Scan Resolution (dpi)" for the [Scan Area] to the value specified in the [Standard Resolution] dialog box.
- **[Settings...] button**  
Opens the [Standard Resolution] dialog box.

[Scanner Adjustment]

- **[Brightness]**  
Adjusts the brightness for the scan.
- **[Scanning Method]**  
Originals can be scanned in [Color] or [Gray] (grayscale). When there are no color separation lines in the inbetween, select the latter mode to scan more quickly.
- **[Color Depth] (channel)**  
Allows you to specify the color depth for the scanning from 8 bits or 16 bits per channel.

- **[Prescan] button**  
Executes the prescan. Executing a prescan shows the whole scanner document table image in the prescan area.
- **[Scan] button**  
Executes the scan. Executing a scan creates a new [Cel] window with the scanned image.

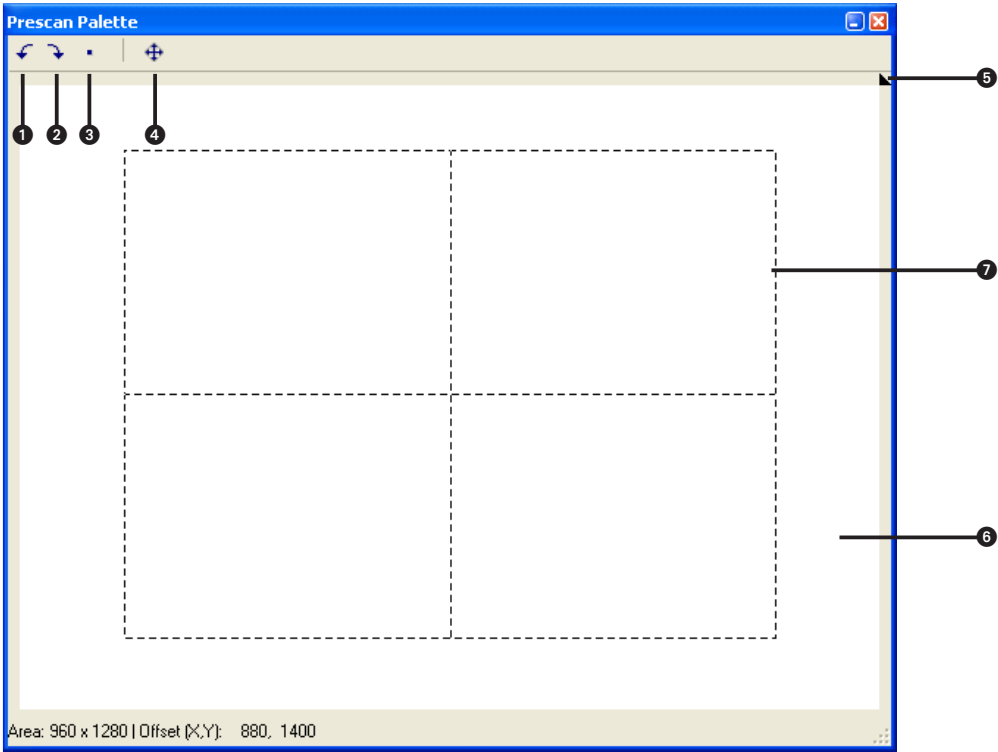
Standard Resolution dialog box (12 Field)



- [Field]**
- **[X/Y]**  
Allows you to select the reference direction (X or Y).
- **[n]field**  
Allows you to specify the unit for the field (normally 12field or 16field).
- **[Ratio] [DPI]**  
Allows you to specify the aspect ratio and the resolution for the screen, respectively.
- [Trimming Offset]**  
Allows you to specify the [X], [Y] values for the scan area offset.

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Prescan palette



A palette for configuring and operating the prescan.

- ➊ **[Rotate] button (left)**  
Rotates the [Prescan Palette] to the left.
- ➋ **[Rotate] button (right)**  
Rotates the [Prescan Palette] to the right.
- ➌ **[Reset Rotation] button**  
Resets the rotation.
- ➍ **[Reset Size] button**  
Resets the [Prescan Palette] resize.  
The [Prescan Palette] can be resized by dragging the lower right corner of the dialog box.
- ➎ **[Origin]**  
Indicates the origin of the offset.  
The origin is a scanner model dependent parameter.

- ➏ **[Prescan] area**  
Prescan view area. Use the image from the prescan to adjust and fix the area to scan.
- ➐ **Scan area (area enclosed by dotted line)**

The dotted line border indicates the scan area.  
The scan area can be moved to any position within the scanner document table. To move, change the mouse pointer to [Hand] tool by placing it inside the area enclosed by the dotted line then drag the border to the desired position.

The scan area size can be adjusted arbitrarily using the mouse pointer. To adjust, change the mouse pointer to a cross by placing it on any of the four corners of the dotted line border. Click to select the corner then drag to the desired size.

Scan area settings are not cleared even if TraceMan HD is finished.  
So, the next time you start TraceMan HD you will find the scan area at the same position as the last time you scanned.

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Saving a scan settings

The scan settings can be saved to a file.

1. Saving

To save, select [Save Scan Settings...] from the [Scan] menu after you have finished the scanning. The scan settings are saved in a **[Scan Settings File] (extension: sss)**.



[Scan Settings File]

2. Loading

To load, select [Load Scan Settings...] from the [Scan] menu. Then select the **[Scan Settings File] (extension: sss)** you want to load from the [Open] dialog box that appears.

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RETAS!PRO

# Chapter 9

## Trace

# TraceMan HD layer structure

## Three types of painting layers

The inbetweens for painting you generate with TraceMan HD are composed of multiple layers and planes. These layers can be classified in three types, each having a slightly different structure: [Mono Paint Layer], [Gray Paint Layer], and [Vector Paint Layer].

### Mono paint layer

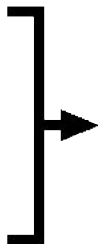
Immediately after a mono trace, this layer is composed of 2 types of planes: the [Outline Plane] and the [Painting Plane].



Outline plane



Painting plane



Complete drawing

- **[Outline Plane]**  
Stores the outlines of the inbetween.
- **[Painting Plane]**  
Stores the color separation lines and the painted colors.
- **[Raster Plane]**  
Additional plane created for applying airbrush separately, for example.

### Gray paint layer

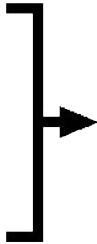
This layer is composed of 2 types of planes: the [Outline Plane] and the [Painting Plane].



[Outline Plane] (grayscale)



[Painting Plane] (with border line)



Complete drawing

- **[Outline Plane]**  
Stores the outlines of the inbetween in grayscale.
- **[Painting Plane]**  
Stores the color separation lines, the painted colors, and also the detailed border lines for painting.
- **[Raster Plane]**  
Additional plane created for applying airbrush separately, for example.

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# Tracing

## Before you start tracing

For better trace results, check the following points before you start tracing.

1. The image is suitable for tracing.

Quality of the lines, quality of the products used for drawing the color separation lines affect the tracing results. Coordinate with people in charge for drawing keys and inbetweens for improving the trace results.

2. Unnecessary colors are deselected.

Deselect unnecessary colors. If they are selected, they might be traced even if unused in the image, creating unnecessary correction works.

3. The contrast for the color used for outlines is stronger to prevent it from mixing with other colors as much as possible.

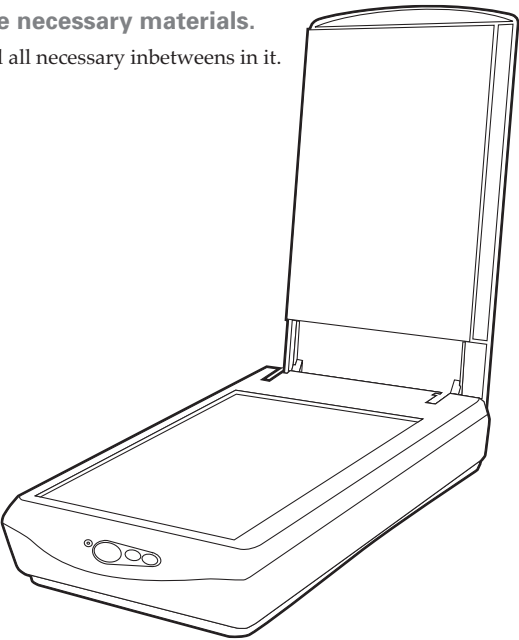
Decreasing the need of removing other colors that got mixed in the outlines increases the efficiency of the painting process.

4. Black is not present in the color separation lines.

Setting the contrast for the color separation lines slightly weaker than black prevents it from mixing with the color separation lines.

5. The conventional scene folder contains all the necessary materials.

Check that the conventional scene folder has the X-sheet and all necessary inbetweens in it.



### Vector paint layer

This layer is composed of the [Outline Plane], the [Color Separation Line Plane] where the color separation lines are drawn, and the [Coloring Plane] for painting.



Outline plane



Color separation line plane 1



Color separation line plane 2



Complete drawing



Coloring plane

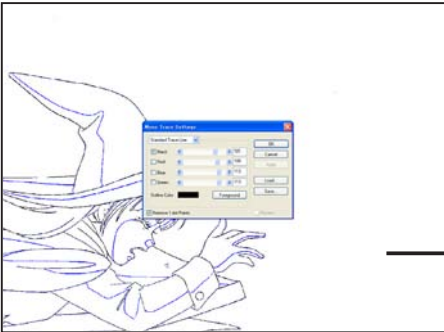
- **[Outline Plane]**  
Stores the outlines of the inbetween as vector lines.
- **[Color Separation Line Plane]**  
Stores the color separation lines drawn with vector lines by color.
- **[Coloring Plane]**  
Stores the painted colors in vector format. This plane is where you do the painting.

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Executing a mono trace

1. Open the Mono Trace Settings dialog box.

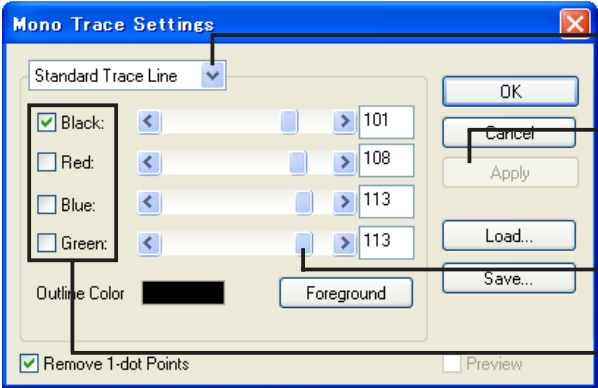
Select [Mono Trace Setting...] from the [Trace] menu and open the [Mono Trace Settings] dialog box.



The preview window at the back of the dialog box can be enlarged, reduced, and scrolled while you have the [Mono Trace Settings] dialog box open.

2a. Trace the outlines and color separation lines 1 to 3. (When applicable)

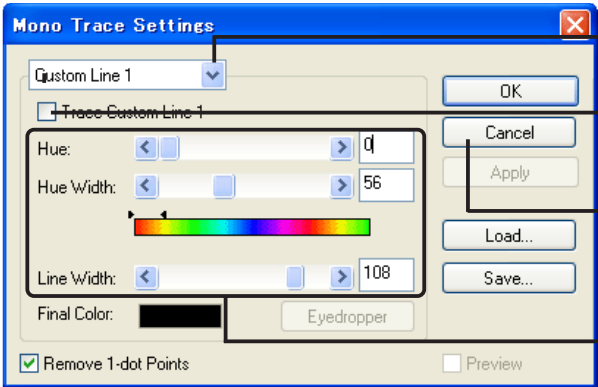
For tracing the outlines and the color separation lines 1 to 3, configure the settings as indicated below.



- 1 Select [Standard Trace Line] from the popup menu.
- 2 Select the check boxes of the target line colors.
- 3 Adjust the contrast color separation lines using the slider so that they appear clear in the preview.
- 4 Click [Apply] to execute the trace.

2b. Trace color separation lines 4 to 6. (When applicable)

If you want to trace color separation lines 4 to 6 in addition to the outlines and the color separation lines 1 to 3, select [Custom Line 1] to [Custom Line 3] from the popup menu of the [Mono Trace Settings] dialog box.



- 1 Select [Custom Line 1 (to 3)] from the popup menu.
- 2 Select the [Trace Custom Line 1 (to 3)] check box.
- 3 Specify the color of the color separation line using the [Hue], [Hue Width], and [Line Width] sliders.
- 4 Click [Apply] to execute the trace.

3. Execute the mono trace.

The image is mono traced.

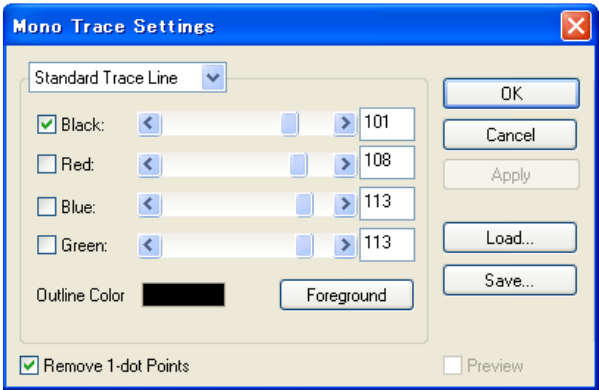


Tips

The preview window at the back of the dialog box can be enlarged, reduced, and scrolled while you have the [Mono Trace Settings] dialog box open.

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Mono Trace Settings dialog box

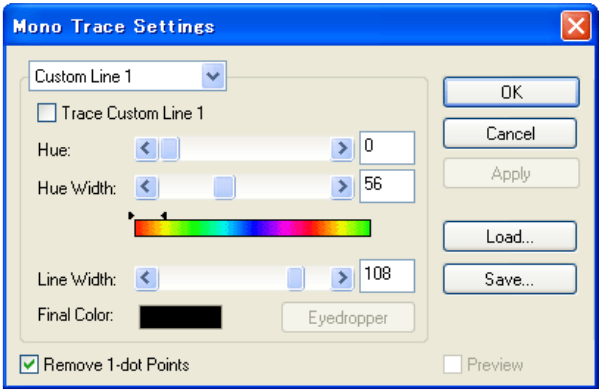


Standard Trace Line

- Allows you to configure the outline (mainly black), and red / blue / green color separation line trace settings.
- **[Black], [Red], [Blue], and [Green] check boxes/sliders**  
Specifies the colors that will be traced.  
Those whose check box is not selected are not traced and are treated as background color (white).  
This characteristic allows you to write directions directly on the drawing paper with green pencil, for example.  
The sliders are for specifying the line width (strength of the line). The line becomes thinner when the slider is moved to the left and thicker when moved to the right.  
However, in some images such as those with strong contrast from the beginning this setting may have little effect.
  - **[Outline Color] color box**  
Shows the color of the outlines after trace. Clicking this box opens a dialog box that allows you to change the color for the outlines.
  - **[Foreground] button**  
Specifies the current foreground color as the color for the outlines.
  - **[Remove 1-dot Points]**  
Selecting this check box keeps the number of tiny (1-dot) dusts and holes that appear as a result of the trace to the minimum which increases the painting process efficiency.
  - **[OK] button**  
Saves the mono trace settings and closes the dialog box.
  - **[Cancel] button**  
Closes the dialog box without saving the mono trace settings.
  - **[Apply] button**  
Closes the [Mono Trace Settings] dialog box and traces the image shown in the active [Cel] window.
  - **[Load...] button**  
Loads a saved [Mono Trace Settings File] (extension: t2f).
  - **[Save...] button**  
Saves the [Mono Trace Settings File] (extension: t2f).
  - **[Preview]**  
Deselecting the check box hides the preview.



[Mono Trace Settings File]



Custom Line 1 (to 3)

- Allows you to trace a color separation line of an arbitrary color.
- **[Trace Custom Line 1 (to 3)]**  
Specifies whether the line will be included in the trace or not. Those whose check box is not selected are not traced and are treated as background color (white).
  - **[Hue] slider**  
Allows you to specify the hue for the color you want to include in the tracing.  
Changing this value changes the position of the two trace range indications shown on the hue color bar below.
  - **[Hue Width] slider**  
Allows you to specify the hue width for the color you want to include in the tracing. Changing this value changes the distance between the two trace range indications shown on the hue color bar below.
  - **[Line Width] slider**  
The sliders are for specifying the line width (strength of the line). Selecting the [Preview] check box allows you to preview the result of the tracing as specified with the parameters in real time.
  - **[Final color] color box**  
Shows the color of the line after trace. Clicking the box opens a dialog box that allows you to configure the color setting.  
Clicking the "Foreground" button on the color setting dialog box specifies the current foreground color as the color for the line.
  - **[Eyedropper] button**  
Changes the mouse pointer to Eyedropper that allows you to pick a color from the [Cel] window and specify it to the "Hue" slider.  
You can also change the mouse pointer to Eyedropper by pressing the [Alt/Opt] key when the mouse pointer is within the "original image view area".

Tips

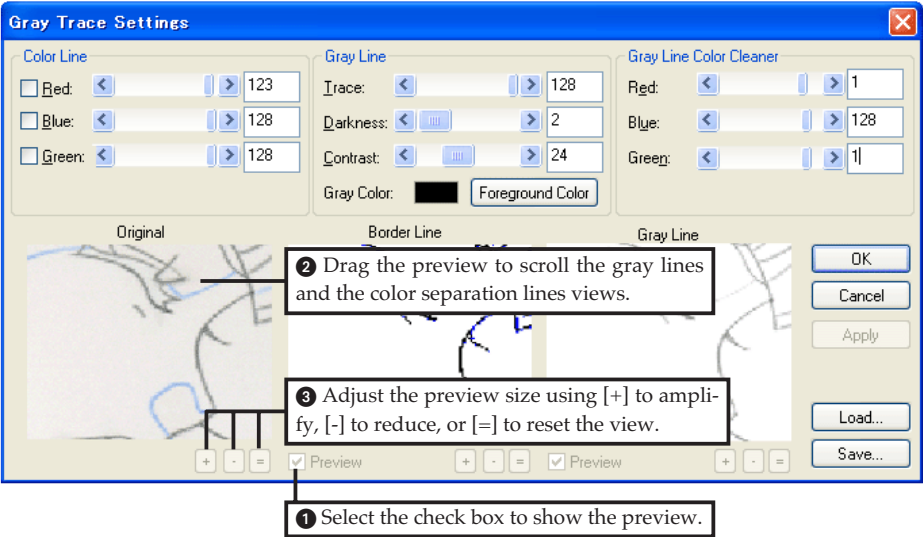
If the quality of the lines among the inbetweens is uniform, you may have the parameters saved in a Mono Trace Settings File so that you do not need to configure the settings but just load the file at subsequent traces. However, always check the trace result as the conditions may not be exactly the same for all of the inbetweens. In practice, the recommendation is to have the trace parameters saved on a scene basis. Similarly, you can also have the settings of parameters such as Trimming Offset and Scan Size saved so that you can redo from the scan efficiently in case of a trouble.

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Executing a gray trace

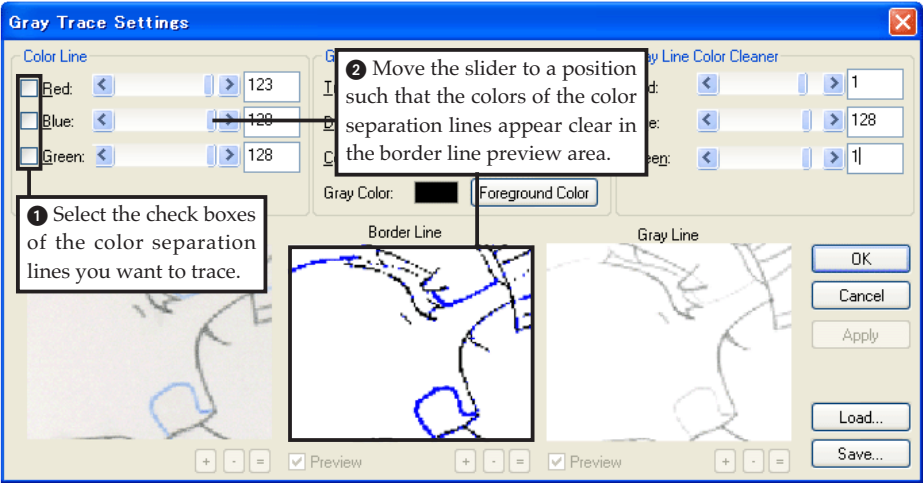
1. Adjust the preview.

Select [Gray Trace Setting...] from the [Trace] menu and open the [Gray Trace Settings] dialog box.



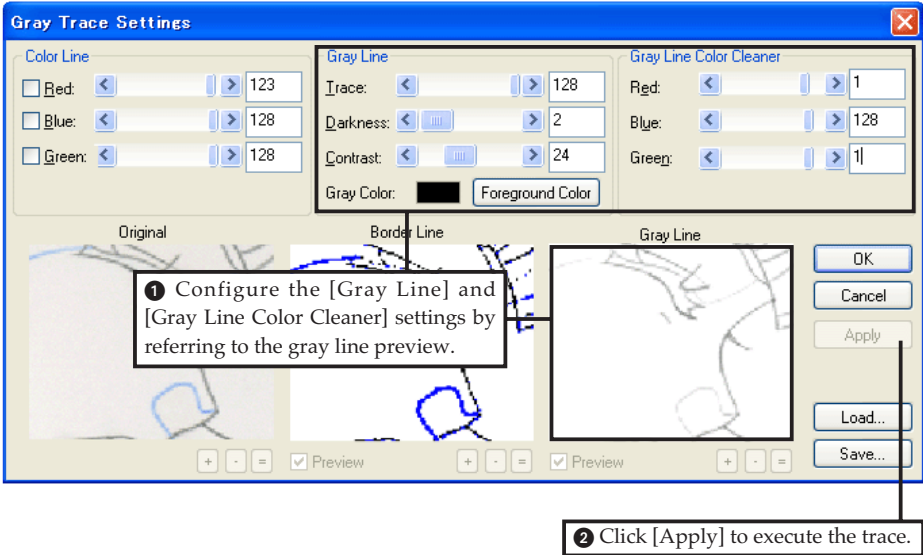
2. Configure the border lines (color separation lines) settings.

Configure the color separation lines you want to include in the border lines.



3. Configure the outline settings.

Configure the color separation lines you want to include in the border lines.



4. Execute the gray trace.

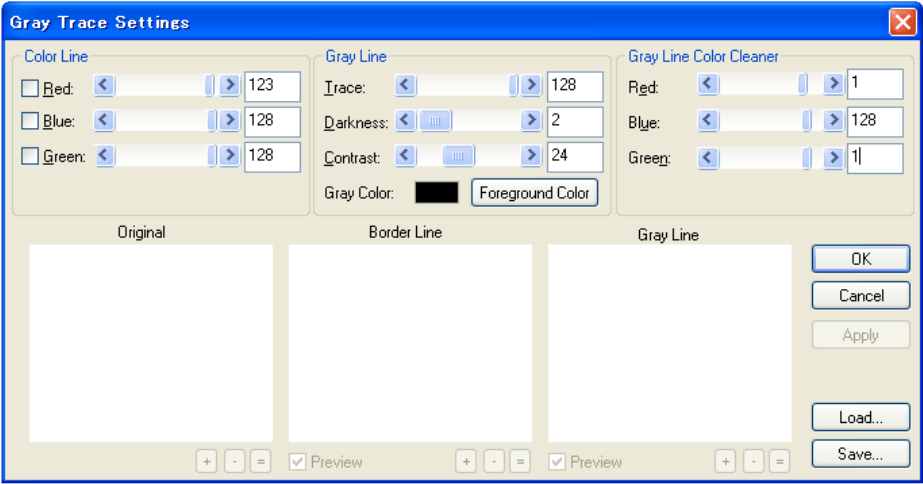
The image is gray traced.



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Gray Trace Settings dialog box



[Color Line]

- **[Red], [Blue], and [Green] check boxes/sliders**  
Specifies the colors (red, blue, and /or green) that will be traced.  
The sliders are for specifying the line width (strength of the line). Selecting the [Preview] check box allows you to preview the result of the changes in the settings in the [Border Line] preview area in real time.

[Gray Line]

- **[Trace] slider**  
Specifies the strength of the gray line.
- **[Darkness] slider**  
Specifies the darkness of the gray line.
- **[Contrast] slider**  
Specifies the contrast of the gray line.
- **[Gray Color] color box**  
Shows the color of the outlines (gray lines) after trace. Clicking this box opens a dialog box that allows you to change the color for the outlines (gray lines).
- **[Foreground Color] button**  
When clicked, specifies the current foreground color as the color for the outlines.
- **[Gray Line Color Cleaner]**  
If the color separation lines are also recognized as gray lines, you may filter out the color components using the sliders below.
- **[Red], [Blue], and [Green] sliders**  
Making the value smaller by moving the slider filters out the relevant color separation line from the outlines (gray lines).

- **[Original] preview area**  
Shows a part of the original image. You can scroll the image by dragging within the area. What you see in the center and right preview areas are the results of the trace on the part shown here using the current parameters.
- **[Border Line] preview area**  
Shows the preview of the result of tracing the border lines (thinned outlines and color separation lines). You can scroll the image by dragging within the area.
- **[Gray Line] preview area**  
Shows the preview of the result of tracing the gray outlines. You can scroll the image by dragging within the area.
- **[+], [-], [=]**  
Enlarges, reduces, and resets the preview, respectively.
- **[Preview]**  
Deselecting the check box hides the preview.
- **[OK] button**  
Confirms the gray trace parameter settings and closes the Gray Trace Settings dialog box.
- **[Cancel] button**  
Closes the Gray Trace Settings dialog box without confirming the gray trace parameter settings.
- **[Apply] button**  
Traces the image shown in the active drawing window and closes the Gray Trace Settings dialog box. The trace parameters also are confirmed.
- **[Load...]**  
Loads a saved **[Gray Trace Settings File] (extension: tgf)**.
- **[Save...]**  
Saves the **[Gray Trace Settings File] (extension: tgf)**.



[Gray Trace Settings File]

Tips

If the quality of the lines among the inbetweens is uniform, you may have the parameters saved in a Gray Trace Setup File so that you do not need to configure the settings but just load the file at subsequent traces. However, always check the trace result as the conditions may not be exactly the same for all of the inbetweens. In practice, the recommendation is to have the trace parameters saved on a scene basis. Similarly, you can also have the settings of parameters such as Trimming Offset and Scan Size saved so that you can redo from the scan efficiently in case of a trouble.

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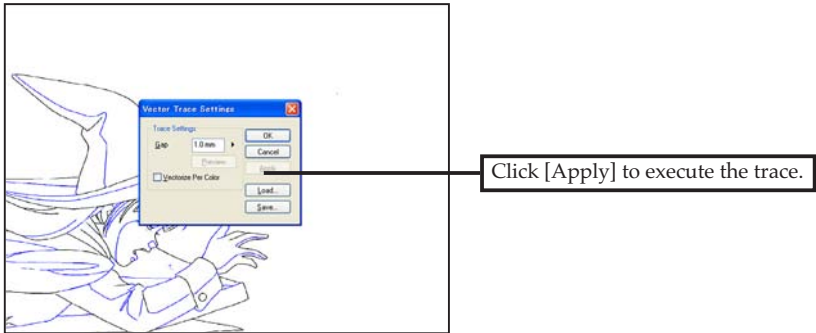
Executing a vector trace

1. Execute a mono trace.

Firstly, execute a mono trace.  
Vector trace can be executed only on a mono trace data.

2. Open the Vector Trace Setup dialog box.

Select [Vector Trace Settings...] from the [Trace] menu and configure the settings.



3. Execute the vector trace.

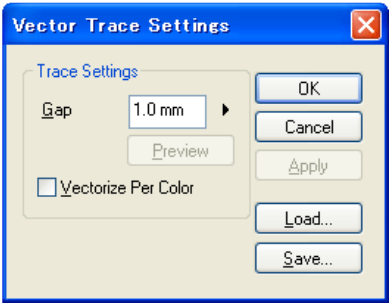
The image is vector traced.



Tips

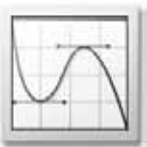
Vector trace can be executed only on a mono trace data.

Vector Trace Settings dialog box



[Trace Settings]

- **[Gap]**  
Gaps smaller than the value specified here are joined at vector trace.
- **[Preview]**  
Clicking the button shows the preview of the vector trace.
- **[Vectorize Per Color]**  
Executes the trace on a per color basis. With this option, tracing is neater when the image has parts where different colors are close each other.
- **[OK] button**  
Saves the trace parameter settings and closes the [Vector Trace Settings] dialog box.
- **[Cancel] button**  
Closes the [Vector Trace Settings] dialog box without saving the trace parameter settings.
- **[Apply] button**  
Executes the vector trace.
- **[Load...] button**  
Loads a saved [Vector Trace Settings File] (extension: **tvsv**).
- **[Save...] button**  
Saves the [Vector Trace Settings File] (extension: **tvsv**).



[Vector Trace Settings File]

Tips

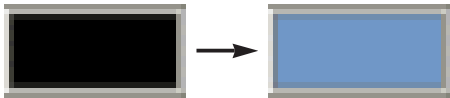
If the quality of the lines among the inbetweens is uniform, you may have the parameters saved in a Vector Trace Setup File so that you do not need to configure the settings but just load the file at subsequent traces. However, always check the trace result as the conditions may not be exactly the same for all of the inbetweens. In practice, the recommendation is to have the trace parameters saved on a scene basis. Similarly, you can also have the settings of parameters such as Trimming Offset and Scan Size saved so that you can redo from the scan efficiently in case of a trouble.

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# Correcting lines

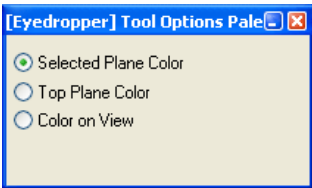
## Eyedropper tool

This is a tool for specifying the foreground color as the color of the clicked area.



The color shown in the [Foreground Color] button at the lower part of the tool palette is replaced with the picked color which becomes the foreground color.

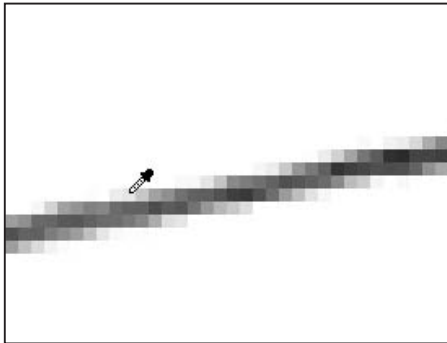
## Eyedropper tool options palette



- **[Selected Plane Color]**  
Picks the color from the active plane.
- **[Top Plane Color]**  
Picks the color from the plane listed first in the layer palette from among the non-transparent ones.
- **[Color on View]**  
Picks the color shown on the screen, irrespective of the layer.

## With gray lines

On an outline on the [Gray Paint Layer], the eyedropper picks the reference color of the gray line but not the halftone pixels present on the line. Be careful.



If you pick a gray from a gray line drawn with black, the selected foreground color will be black, not gray.

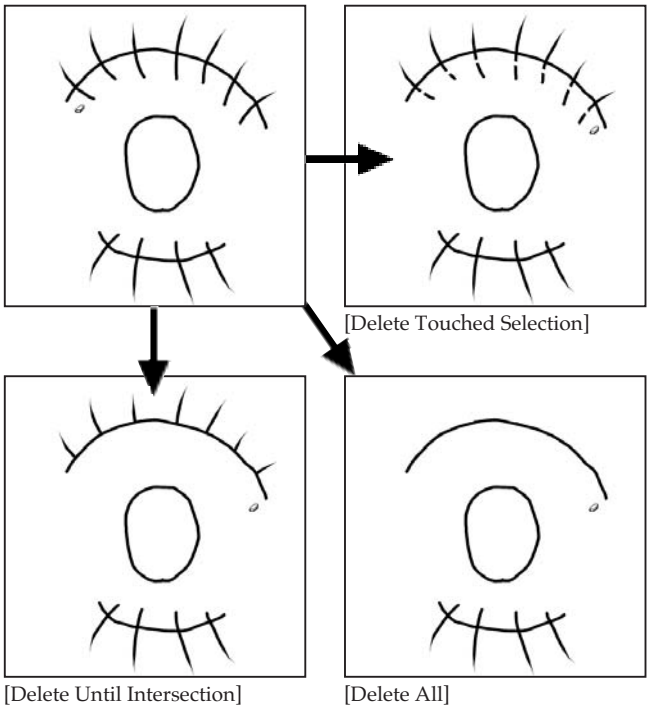
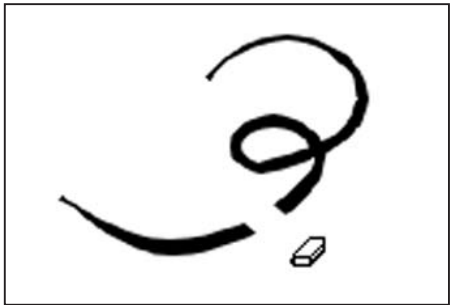
## Tips

- You can switch the drawing tool with which you are working to the [Eyedropper] tool by pressing the [Alt/Opt] key. (The [Eyedropper] tool is enabled during the time you have the [Alt/Opt] key held down)
- Right clicking changes the tool to [Eyedropper] even if the selected tool is another. The color is picked when you right click.

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Eraser tool  

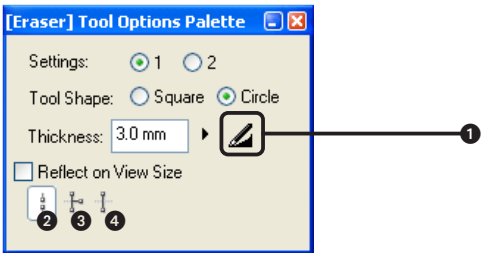
Selecting the [Eraser] tool and dragging it allows you to erase a line from the [Cel] window.



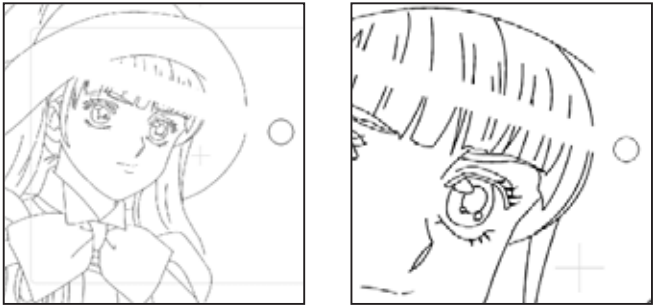
[Delete Until Intersection]

[Delete All]

Eraser tool options palette



- **[Settings]**  
Allows you to have 2 eraser tool settings stored and select one using the radio buttons.
- **[Tool Shape]**  
Allows you to change the eraser tool shape using the radio buttons.
- **[Thickness]**  
Allows you to specify the line thickness.
- **[Reflect on View Size]**  
If selected, the eraser size when the screen view is scaled becomes the size when the screen is shown at 100% view.



At full screen mode

At 100% view mode

- ❶ **[Reflect Pen Pressure on Thickness]**  
Allows you to reflect the pen pressure applied for drawing a line in its thickness. Click to toggle the function on and off.
- ❷ **[Delete Touched Selection] (Only vector drawing)**  
Deletes only the parts touched with the mouse pointer. This is the normally selected option.
- ❸ **[Delete Until Intersection] (Only vector drawing)**  
Deletes the part of a line touched with the mouse pointer up to the intersection with another line.
- ❹ **[Delete All] (Only vector drawing)**  
Deletes a line touched with the mouse pointer completely.

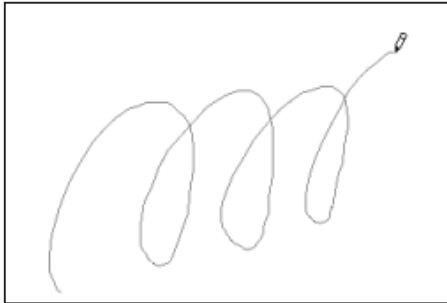
Tips

- Pressing the [Alt/Opt] key before clicking changes the tool to [Join Line].

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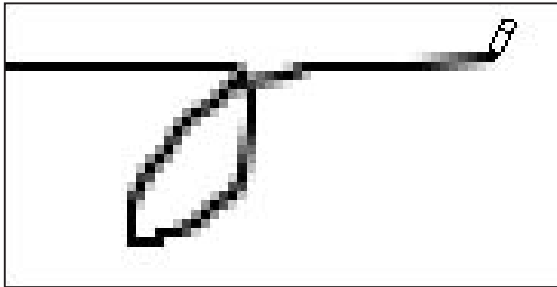
Pencil tool  

Allows you to draw with the foreground color by the dot. Click to draw a point and drag to draw a line. This is an ideal tool for making detailed corrections.



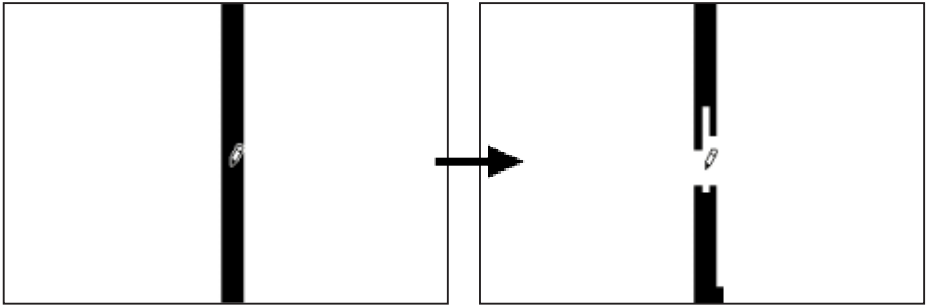
With gray lines

In the [Gray Line Layer] edit mode, the [Pencil] tool can draw a pen size anti-aliased line by the dot.



Auto-erase function

If you start drawing with the [Pencil] tool along a line already painted in foreground color, the tool erases the line. That is, you can erase without changing to the [Eraser] tool. The function remains enabled until you stop dragging. To turn off this function and add a portion to a line, drag with the [Shift] key held down.



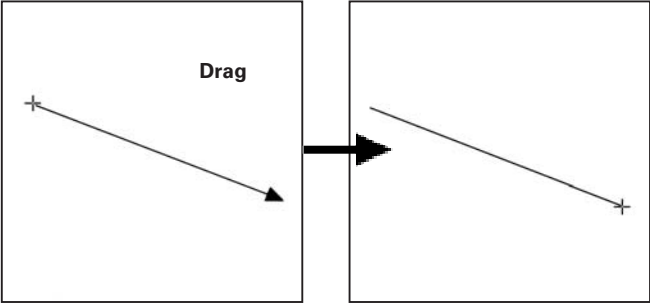
Tips

The [Pencil] tool cannot be used in the [Vector Paint Layer].

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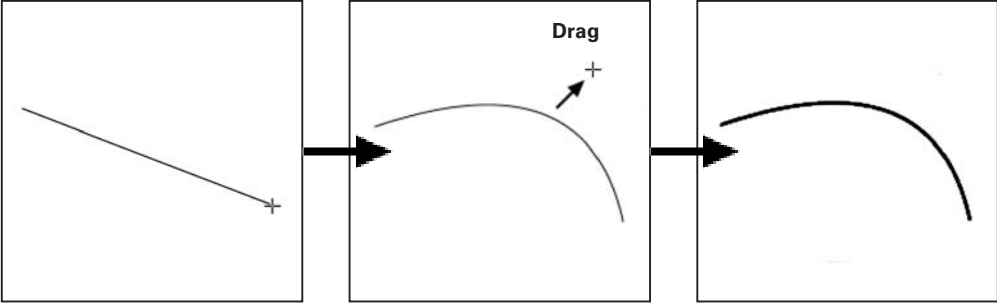
Line tool  

Allows you to draw a straight line from the starting point to the end point by dragging. Releasing the mouse confirms the line.



Curve tool  

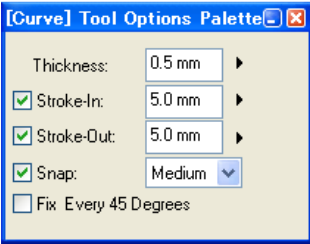
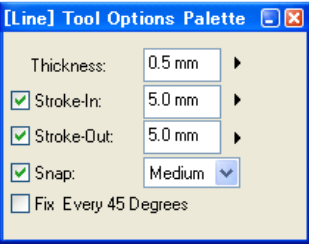
Allows you to draw a curve by dragging from the starting point to the end point, and adjusting the straight line. Click to confirm the curve.



- 1 Drag from the starting point to the end point.
- 2 Release the mouse pointer. Adjust the curve using the mouse pointer or the graphics tablet pen.
- 3 Click to confirm the curve.

Line/Curve tool options palette

\* Operations are common to both tools.



- **[Thickness]**  
Allows you to specify the line thickness.
- **[Stroke-in]**  
Adds a [Stroke-in] to the beginning of a line.
- **[Stroke-out]**  
Adds a [Stroke-out] to the end of a line.
- **[Snap] (Only vector drawing)**  
Allows you to join a line automatically to another by moving the mouse pointer close.
- **[Fix Every 45 Degrees]**  
Fixes the mouse pointer movement angle to 45 degrees.

Tips

- Pressing the [Alt/Opt] key before clicking changes the tool to [Eyedropper].
- Pressing the [Shift] + [Alt/Opt] keys before clicking allows you to pick a color from the light table with the tool changed to [Eyedropper].
- Pressing the [Shift] key when dragging, fixes the angle to 45 degrees.

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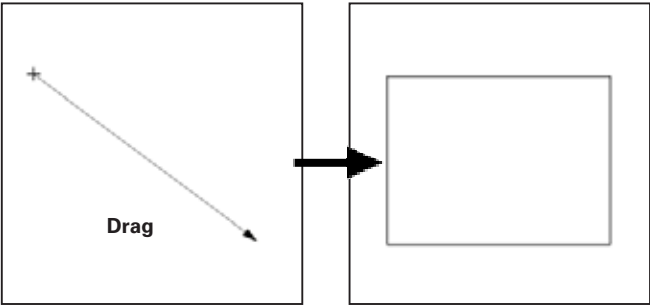
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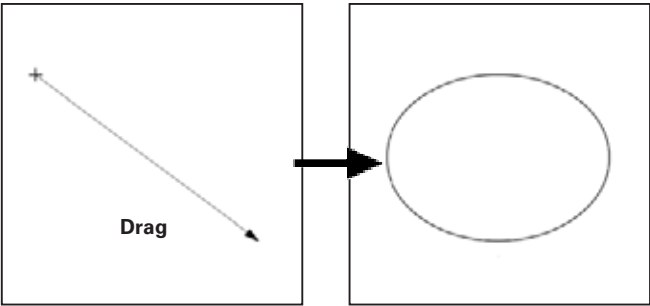
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Shape tool  

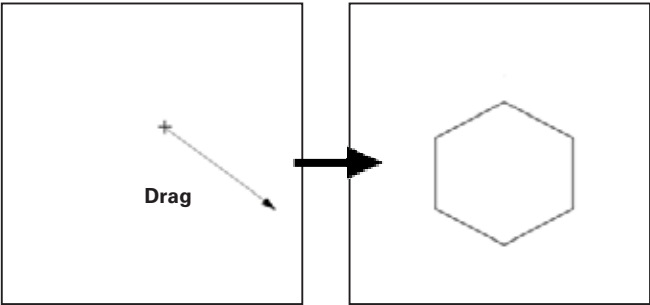
Allows you to draw a rectangle, an ellipse, or a polygon by dragging from the starting point to the end point. Releasing the mouse confirms the shape.



[Rectangle]

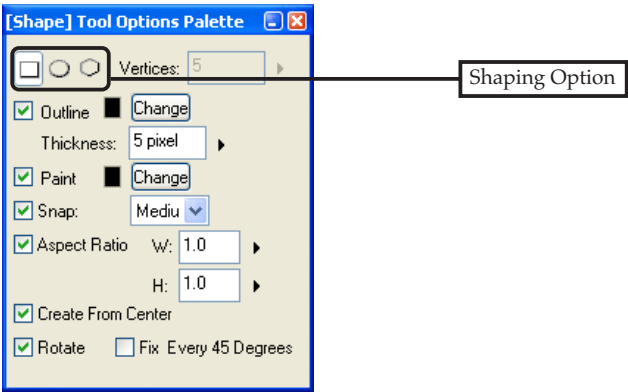


[Ellipse]



[Polygon]

Shape tool options palette



- **Shaping Option**  
Allows you to select the shape to draw from [Rectangle], [Ellipse], and [Polygon]. To select, click the corresponding icon.
- **[Vertices]**  
Allows you to select the number of vertices for the polygon to draw (applicable when [Polygon] is selected as the shape).
- **[Outline]**  
Allows you to configure the outline of the shape to draw.
  - **[Change]**  
Allows you to change the color to that specified with the [Foreground Color] button in the [Tool Palette].
  - **[Thickness]**  
Allows you to specify the line thickness.
- **[Paint] (Only raster drawing)**  
Paints the shape when drawn.
  - **[Change]**  
Allows you to change the color to that specified with the [Foreground Color] button in the [Tool Palette].
- **[Snap] (Only vector drawing)**  
Allows you to join a line automatically to another by moving the mouse pointer close.
- **[Aspect Ratio]**  
Allows you to specify the height to width ratio of the shape to draw.
- **[Create From Center]**  
Draws the shape from the center.
- **[Rotate]**  
Allows you to rotate the shape immediately after drawn. Click after rotating to confirm.
  - **[Fix Every 45 Degrees]**  
Selectable only when [Rotate] is selected. Rotates the shape in units of 45 degrees.

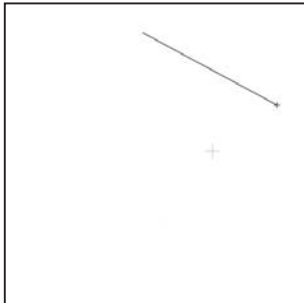
Tips

- Pressing the [Alt/Opt] key before clicking changes the tool to [Eyedropper].
- Pressing the [Shift] + [Alt/Opt] keys before clicking allows you to pick a color from the light table with the tool changed to [Eyedropper].
- Pressing the [Shift] key when dragging, fixes the angle to 45 degrees. Pressing the [Shift] key when dragging the shape fixes the aspect ratio.

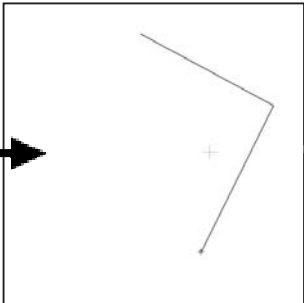
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Polyline tool  

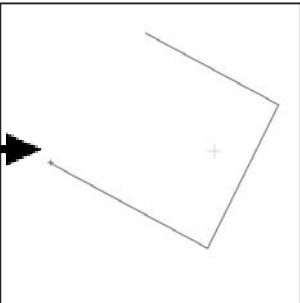
Allows you to draw a polyline by clicking repeatedly while dragging from the starting point to the end point. Double clicking confirms the position of the last vertex and completes the drawing.



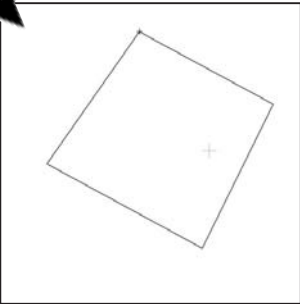
**1** Click on the starting point. Clicking at the next point draws a line.



**2** Clicking again at a third point makes the line a polyline.

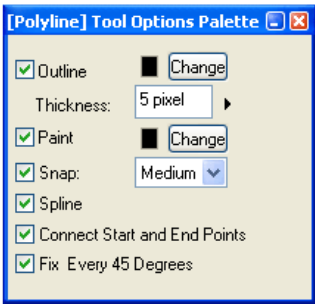


**3a** Double clicking fixes the shape and completes the drawing.



**3b** If [Connect Start and End Points] is selected, the polyline becomes a closed shape, with the end point connected to the starting point.

Polyline tool options palette



- **[Outline]**  
Allows you to configure the outline of the polyline to draw.
- **[Change]**  
Allows you to change the color to that specified with the [Foreground Color] button in the [Tool Palette].
- **[Thickness]**  
Allows you to specify the line thickness.
- **[Paint] (Only raster drawing)**  
Paints the closed area formed by the polyline.
- **[Change]**  
Allows you to change the color to that specified with the [Foreground Color] button in the [Tool Palette].
- **[Snap] (Only vector drawing)**  
Allows you to join a line automatically to another by moving the mouse pointer close.
- **[Spline]**  
Allows you to connect a point selected by clicking with the next using a Bezier curve.
- **[Connect Start and End Points]**  
Allows you to connect the end point with the starting point by double clicking on the last point.
- **[Fix Every 45 Degrees]**  
Fixes the mouse pointer movement angle to 45 degrees.

Tips

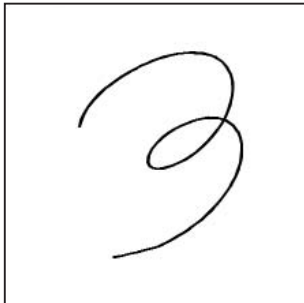
- Pressing the [Shift] key when drawing the polyline, fixes the angles to 45 degrees.

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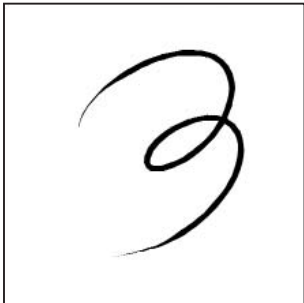


Stroke-in / Stroke-out / Compensation

Some of the drawing tools on the [Tool Options Palette] can be configured to have [Stroke-in], [Stroke-out], and/or [Compensation] applied. The stroke-in, stroke-out, and compensation can be configured using either numeric entry or the slider.



[Stroke-in], [Stroke-out]: OFF



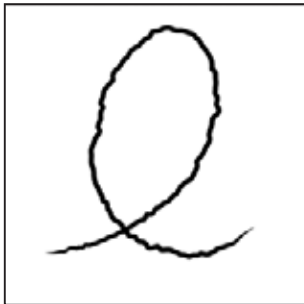
[Stroke-in], [Stroke-out]: ON

Stroke-in

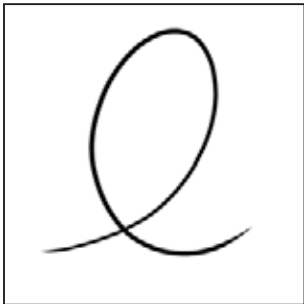
Allows you to apply a [Stroke-in], that is, a gradual thickening of the stroke at the beginning of a line. For example, if you specify 5.0 mm, the thickness of the line increases gradually for 5.0 mm from the starting point irrespective of the pen pressure.

Stroke-out

Allows you to apply a [Stroke-out], that is, a gradual thinning of the stroke at the end of a line. For example, if you specify 5.0 mm, the thickness of the line decreases gradually for 5.0 mm to end of the line irrespective of the pen pressure.



[Compensation]: OFF



[Compensation]: ON

Compensation

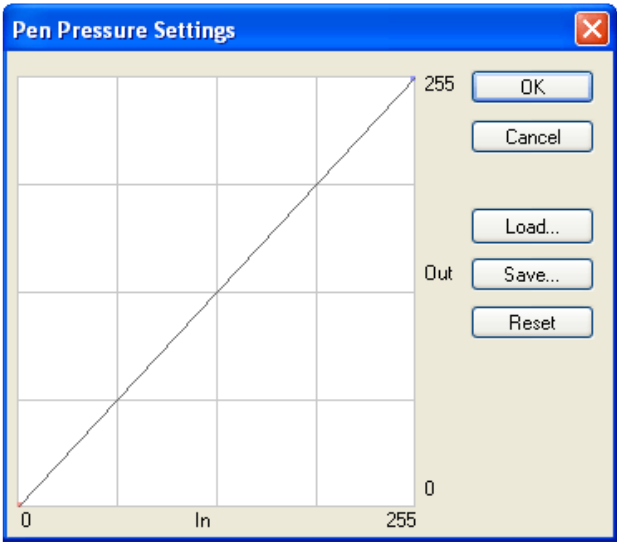
Allows you to smooth shaky lines drawn by hand on the graphics tablet. The larger the compensation the smoother the line; however, too much compensation may result in a line quite different from that drawn on the graphics tablet with its original expressiveness lost. If compensation is turned off, data from the graphics tablet are read and reflected on the drawing as they are, that is, including noise. So, too small values are not recommended either because they increase the data volume for "vector drawings".

Pen pressure

Select [Settings] → [Pen Pressure...] from the [Edit] menu to open the dialog box. The dialog box allows you to adjust the pen pressure sensitivity for some of the drawing tools to make drawing easier.

Pen Pressure Settings dialogue

Clicking on the graph allows you to specify up to 2 points. Adjust the pen pressure curve by dragging the points. The more the difference between the upper limit and lower limit, the softer the drawing tool pen pressure, and the smaller the difference, the harder the pen pressure.



Setting example

- **[OK]**  
Confirms the settings and closes the dialog box.
- **[Cancel]**  
Cancels the settings and closes the dialog box.
- **[Load...]**  
Opens the [Open] dialog box that allows you to select and load a saved **[Pen Pressure Settings file] (extension: pps)**.
- **[Save...]**  
Opens the [Save As] dialog box that allows you to save a pen pressure settings as a **[Pen Pressure Settings file] (extension: pps)**.
- **[Reset]**  
Resets the pen pressure settings to the default values.

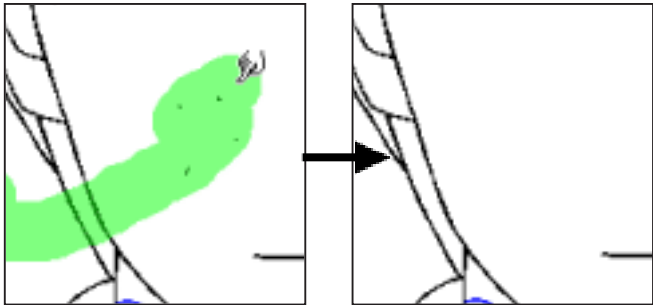


[Pen Pressure Settings file]

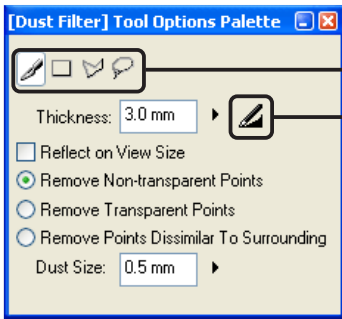
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Dust Filter tool  

This tool allows you to remove all dusts smaller than a size specified in the tool options palette from an image area whose shape is also specified there in one operation.



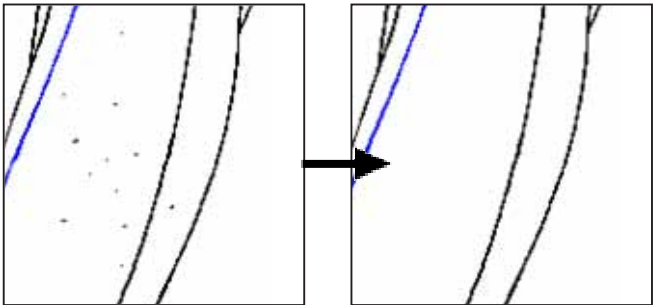
Dust Filter tool options palette



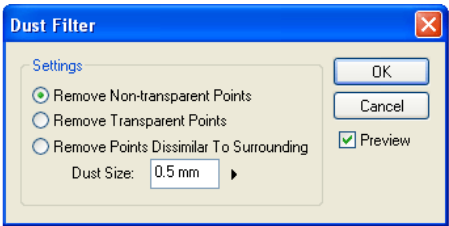
- 1 **Selection Option**  
Allows you to select the tool for selecting an area from [Pen], [Rectangle], [Polyline], and [Lasso]. To select, click the corresponding icon.
- **[Thickness]**  
Allows you to specify the thickness for the pen-shaped mouse pointer using numeric entry or slider.
- 2 **[Reflect Pen Pressure on Thickness]**  
Reflects the pen pressure applied when drawing with the pen on the graphics tablet on the line thickness.
- **[Reflect on View Size]**  
If selected, the eraser size when the screen view is scaled becomes the size when the screen is shown at 100% view.
- **[Remove Non-transparent Points]**  
Fills all points in a color different to that of the background (pure white with RGB at 255, 255,255) with the background color.
- **[Remove Transparent Points]**  
Fills all dusts in background color (pure white with RGB at 255,255,255) with the surrounding color.
- **[Remove Points Dissimilar To Surrounding]**  
Fills dusts in a color different to that of the surrounding with the surrounding color.
- **[Dust Size]**  
Allows you to specify the maximum size of the dusts to remove.

Dust Filter (Filter) [Filter] → [Dust Filter...]

Allows you to remove all dusts smaller than a size specified in the dialog box.



Dust Filter dialog box



- [Settings]**
- **[Remove Non-transparent Points]**  
Fills all points in a color different to that of the background (pure white with RGB at 255, 255,255) with the background color.
  - **[Remove Transparent Points]**  
Fills all dusts in background color (pure white with RGB at 255,255,255) with the surrounding color.
  - **[Remove Points Dissimilar To Surrounding]**  
Fills dusts in a color different to that of the surrounding with the surrounding color.
  - **[Dust Size]**  
Allows you to specify the maximum size of the dusts to remove.
  - **[Preview]**  
Allows you to preview the results.

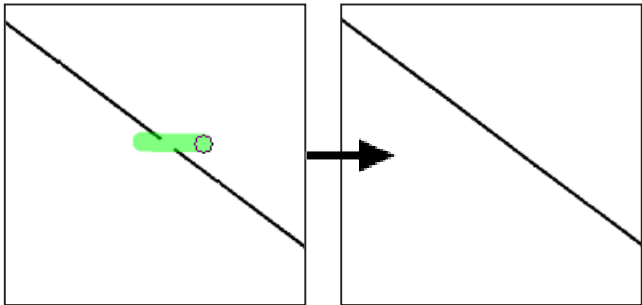
Tips

- Advantages of the [Dust Filter] command under the [Filter] menu (when compared to the [Dust Filter] tool that can remove dust quickly from a specific area) are that you can remove dusts from the entire image at once and that you can check the result with [Preview].
- If the size specified in [Dust Size] is too large, you may risk the removal of necessary lines.
- [Dust Filter] functions cannot be used in the [Vector Paint Layer].

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Join Line tool  

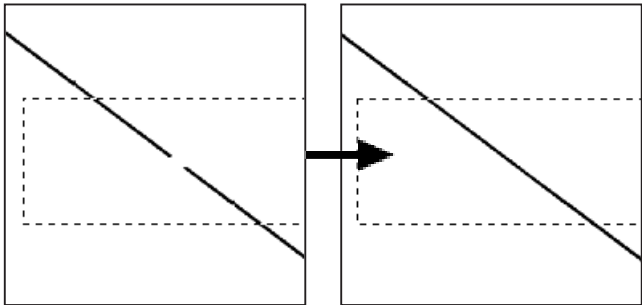
Allows you to draw perfectly closed areas by filling gaps between lines for painting.



1 Connect the points you want to join using the mouse pointer. 2 Release the mouse. The lines become "join the lines".

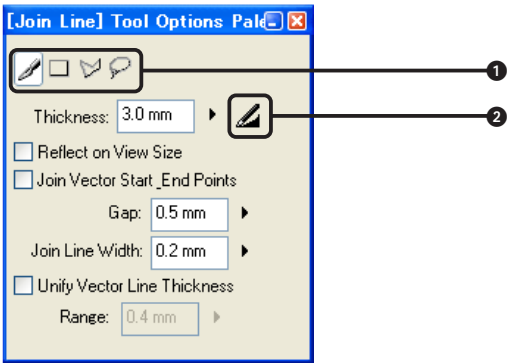
Join Line [Edit] → [Repair Line] → [Join Line]

Allows you to "join the lines" within a selection.



1 Select the area where the lines you want to join are drawn using the [Selection] tool. 2 Select [Repair Line] → [Join Line] from the [Edit] menu to "join the lines".

Join Line tool options palette



- 1 **Selection Option**  
Allows you to select the method for specifying the target area (selection) from [Pen], [Rectangle], [Polyline], and [Lasso]. For [Pen], the selection is the area filled using the tool while for [Rectangle], [Polyline], and [Lasso] is the area enclosed by the shape drawn with the tool.
- **[Thickness]**  
Allows you to specify the thickness of the line for the [Pen] tool.
- 2 **[Reflect Pen Pressure on Thickness]**  
Allows you to reflect the pen pressure applied for drawing a line in the thickness of the line for the [Pen] tool. Click to toggle the function on and off.
- **[Reflect on View Size]**  
If selected when [Pen] is selected as the Selection Option, the pen size when the screen view is scaled becomes the size when the screen is shown at 100% view.
- **[Join Vector Endpoints] (Only for vector drawing with STYLOS)**  
If there are two or more endpoints, moves the endpoints to an intermediate position. If there is only one endpoint, extends the line up to another in the vicinity.
- **[Gap]**  
Join Line is executed on gaps smaller than the size specified here.
- **[Join Line Width]**  
Allows you to specify the width of the line for connecting raster lines.
- **[Unify Vector Line Thickness] (Only for vector drawing with STYLOS)**  
If selected when joining vector lines, the thickness of whole line is unified.
- **[Range] (Only for vector drawing with STYLOS)**  
Joins the lines extending the thicker one and at the specified distance from each endpoint (distance specified with [Range]).

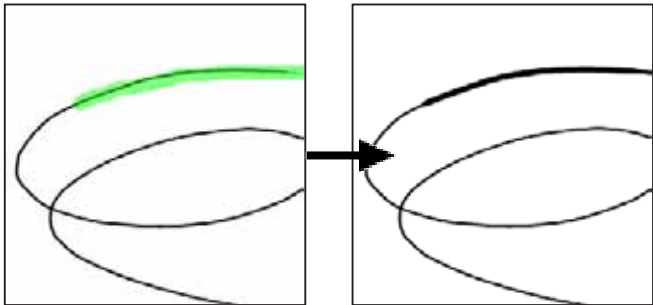
Tips

- Pressing the [Alt/Opt] key before clicking changes the tool to [Eyedropper].
- Pressing the [Shift] + [Alt/Opt] keys before clicking allows you to pick a color from the light table with the tool changed to [Eyedropper].
- Pressing the [Space] key before clicking changes the tool to [Pencil].
- Pressing the [Shift] + [Space] keys before clicking changes the tool to [Pencil] with the auto-erase function turned off.

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Width Change tool  

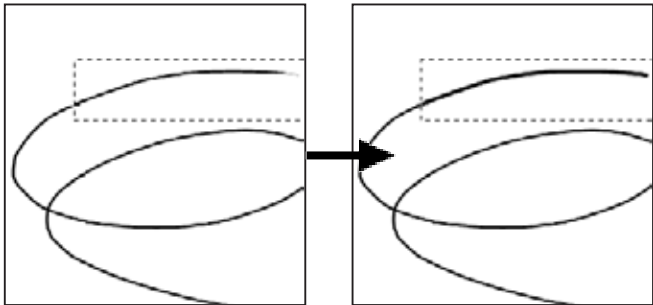
Allows you to thicken or thin the width of a line.



- 1 Select the part of the line you want to change the width with the mouse pointer.
- 2 Release the mouse. The line width is changed.  
Example: [Thickening]

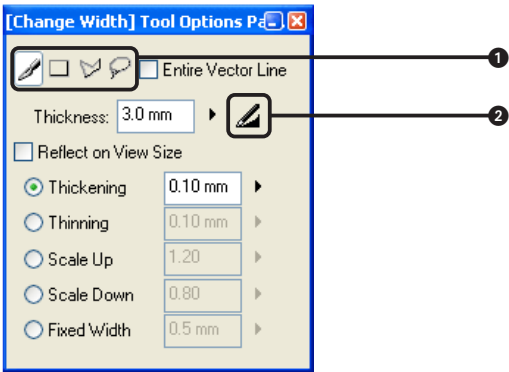
Change Width  →  → 

Allows you to [Change Width] within a selection.



- 1 Select the area where you want to change the line width using the [Selection] tool.
- 2 Select [Repair Line] → [Change Width] from the [Edit] menu to "change the width" of the line.  
Example: [Fixed Width]

Change Width tool options palette



- 1 Selection Option**

Allows you to select the method for specifying the target area (selection) from [Pen], [Rectangle], [Polyline], and [Lasso]. For [Pen], the selection is the area filled using the tool while for [Rectangle], [Polyline], and [Lasso] is the area enclosed by the shape drawn with the tool.

  - **[Entire Vector Line] (Only vector drawing)**  
Applies [Change Width] to the whole extension of the line touched using the Selection Option.
  - **[Thickness]**  
Allows you to specify the thickness of the line for the [Pen] tool.
- 2 [Reflect Pen Pressure on Thickness]**

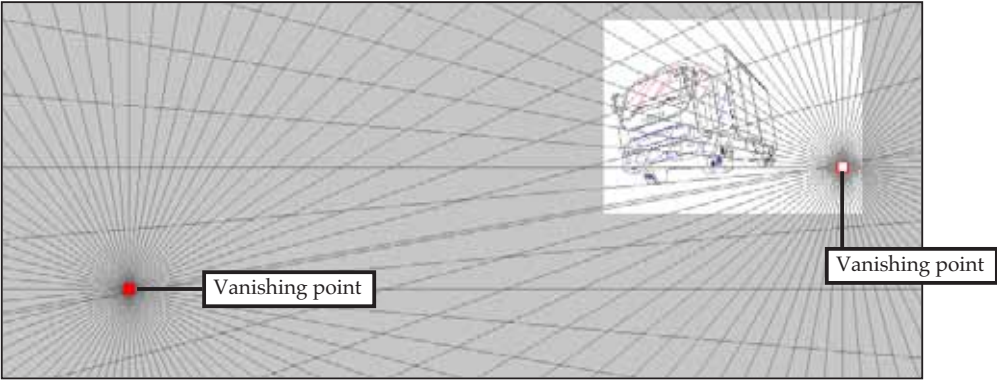
Allows you to reflect the pen pressure applied for drawing a line in the thickness of the line for the [Pen] tool. Click to toggle the function on and off.

  - **[Reflect on View Size]**  
If selected when [Pen] is selected as the Selection Option, the pen size when the screen view is zoomed in becomes the size when the screen is shown at 100% view.
  - **[Thickening]**  
Thickens the line by the unit specified here.
  - **[Thinning]**  
Thins the line by the unit specified here.
  - **[Scale Up] (Only vector drawing)**  
Thickens the line by the percentage specified here.
  - **[Scale Down] (Only vector drawing)**  
Thins the line by the percentage specified here.
  - **[Fixed Width] (Only vector drawing)**  
Unifies the line width to the value specified here.

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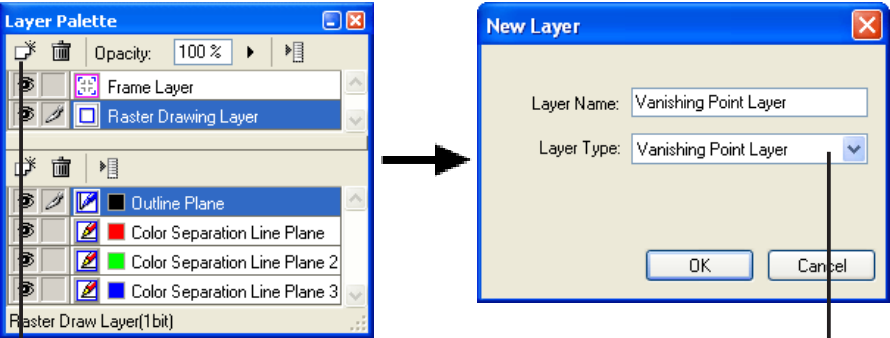
Vanishing point layer

Allows you specify a [Vanishing Point] and have auxiliary lines shown on the screen for helping you to draw with perspective.



1. Create a vanishing point layer.

Open the [Layer Palette] by selecting [Layer Palette] from the [Window] menu or using the [F5] key.

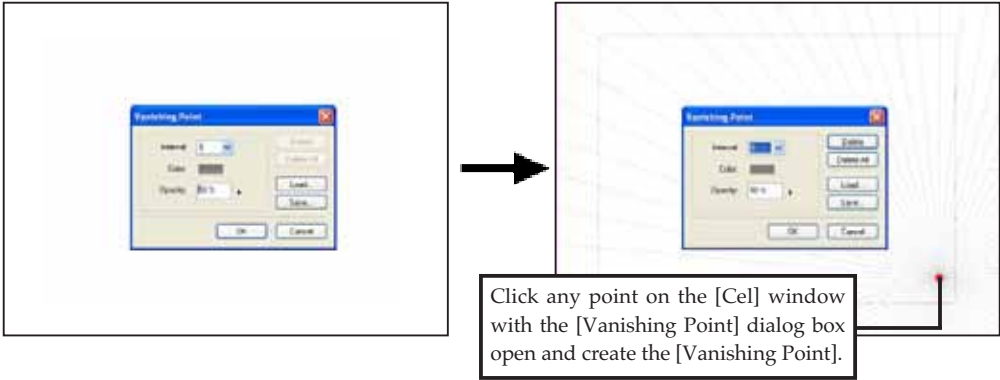


1 Click the [New Layer] button and open the [New Layer] dialog box.

2 Select [Vanishing Point Layer] and click [OK]. The [Vanishing Point] dialog box appears.

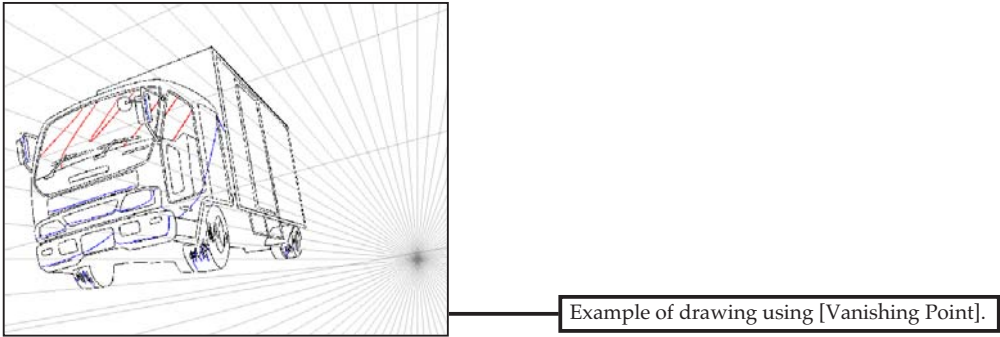
2. Create a vanishing point.

In the [Vanishing Point] dialog box, specify the [Interval], [Color], and [Opacity] for the auxiliary lines to show.



3. Confirm the vanishing point.

Click [OK] in the [Vanishing Point] dialog box to confirm the [Vanishing Point]. You can now draw in the [Cel] window by referencing the auxiliary lines.



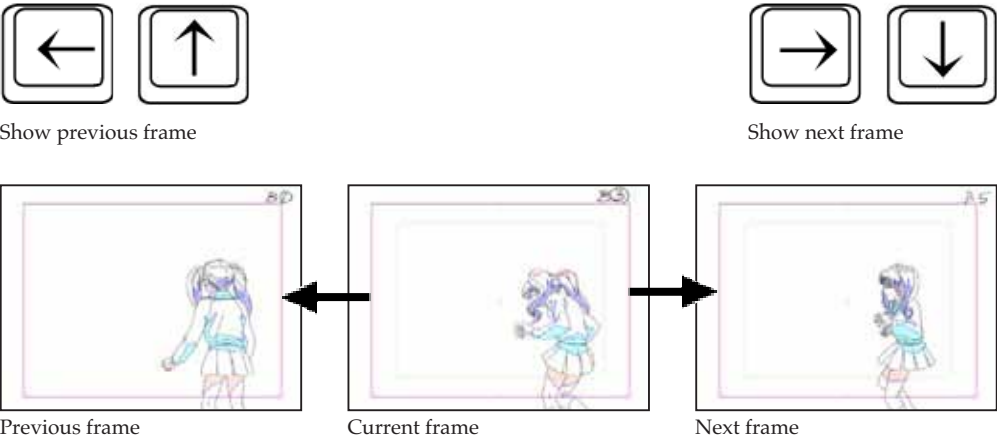
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# Checking

## Simple motion check on current cel

This function allows you perform a motion check on sequentially numbered images of the current cel. It allows you to specify the view size and the range of images to check, as well as perform the motion check by the frame using key operation. However, this function does not allow you to check the cel stacking or perform a motion check according to the timings specified in the X-sheet.

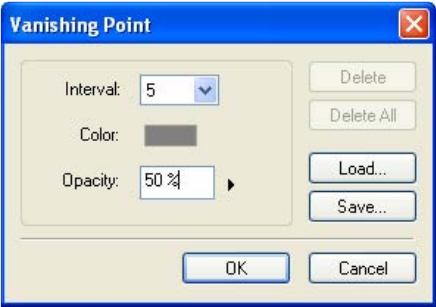


### 1. Select the command.

Select [Motion Check...] from the [View] menu with the [Cel] window opened.



## Vanishing Point dialog box



- **[Interval]**  
Select an angle for the auxiliary lines from 1, 5, 10, 15, and 30 degrees.
- **[Color]**  
Shows the auxiliary line color. Click the [Color] button to open the [Color Settings] panel (Windows) or the [Color] dialog box (Mac OS). Selecting a color there changes the line color.
- **[Opacity]**  
Select a darkness for the auxiliary lines.
- **[Delete]**  
Deletes the selected [Vanishing Point].
- **[Delete All]**  
Deletes all [Vanishing Points] in the [Cel] window.
- **[Load...]**  
Loads a saved **[Vanishing Point Settings file] (extension: vpf)**.
- **[Save...]**  
Saves the information of the created [Vanishing Point] as a **[Vanishing Point Settings file] (extension: vpf)**.
- **[OK]**  
Confirms the settings and closes the dialog box.
- **[Cancel]**  
Cancels the settings and closes the dialog box.



[Vanishing Point Settings file]

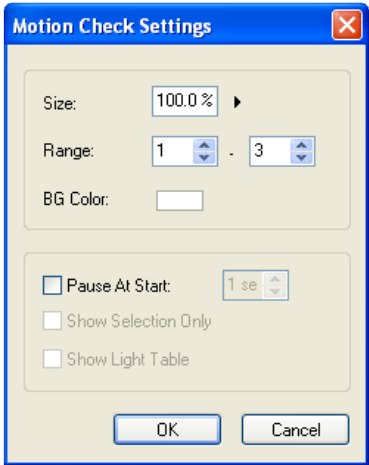
## Tips

- Operations involving vanishing points are possible only when the dialog box is visible. To move a [Vanishing Point], put the mouse pointer in the center of the [Vanishing Point] and drag.
- The [Vanishing Point] may be located out-of-the cel. You may have multiple [Vanishing Points].
- To perform operations involving [Vanishing Point] again, re-open the [Vanishing Point] dialog box by double clicking [Vanishing Point Plane] in the [Layer Palette].

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2. Configure the Motion Check settings.

Configure the necessary items in the [Motion Check Settings] dialog box that appears.



(Screen image from STYLOS HD)

- **[Size]**  
Allows you to specify the view size for the images in percent.
- **[Range]**  
Allows you to specify the range of sequentially numbered cels to view using the numbers shown in the [File Previewer].
- **[BG Color]**  
Clicking this item allows you to specify the BG for the images being played.
- **[Pause At Start]**  
Selecting this check box inserts a pause at the start of the motion check for a specified number of seconds. The pause can be specified in the 1 - 10 range. This pause is used to separate one slide show from another when played continuously.
- **[Show Selection Only]**  
Allows you to view only a selected part of the images if selection is made in the [Cel] window in advance using a selection tool.
- **[Show Light Table]**  
Allows you to also view the images loaded to the light table in the motion check.
- **[OK]**  
Confirms the settings and executes the motion check.
- **[Cancel]**  
Cancels the settings and closes the dialog.

3. Check motion.

The images configured using [Motion Check Settings] dialog box are shown as a slide show.



4. Performing a motion check by the frame using key operation.

The following keyboard operations are available during a Motion Check for performing a check by the frame.

- **[Space]**  
Pause; Play
- **[Esc]**  
Stop
- **[Left] [Up]**  
Show previous frame
- **[Right] [Down]**  
Show next frame

Tips

The [Motion Check] from the X-sheet allows you to check the cel stacking as well as the timings specified in the X-sheet. For details, see the relevant part in "Chapter 4 Basics of RETAS!PRO".

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Slide show

This function allows you perform a simple check on sequentially numbered images of the current cel. No settings are available for this function.

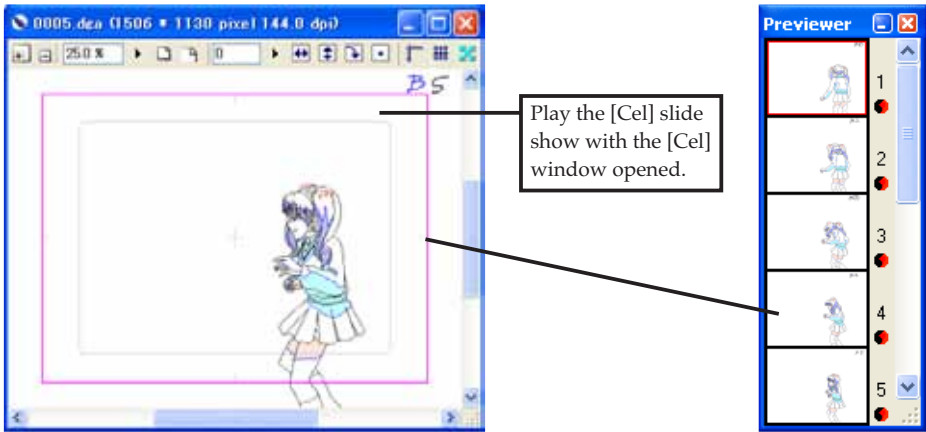
1. Select the command.

Select [Slide Show] from the [View] menu with the [Cel] window opened.



2. Play the slide show.

The sequentially numbered images are shown as a slide show. To confirm the currently shown image, check the [File Previewer]. It is indicated with a red frame.



3. Finish the slide show.

Press [Esc] key.

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RETAS!PRO

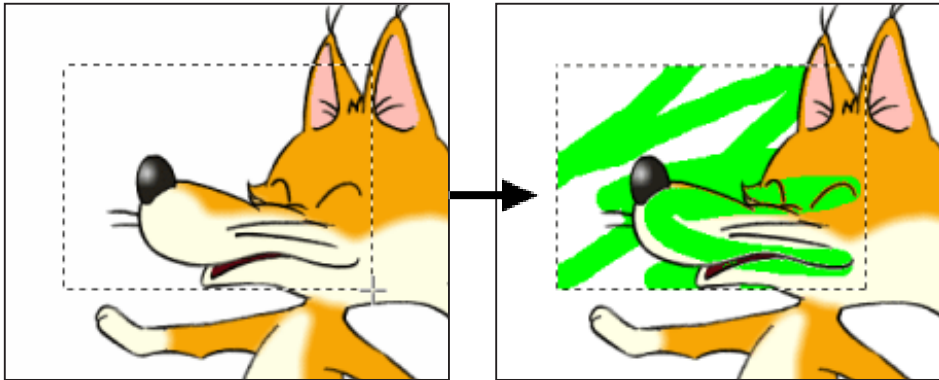
# Chapter **10**

## Selection

# Selection

## What is a selection?

Selection is an area specified (enclosed in dashed line) using the [Selection] tool. With a selection, the scope of a command or a tool becomes limited to the selection.



## Basic operations using Selection

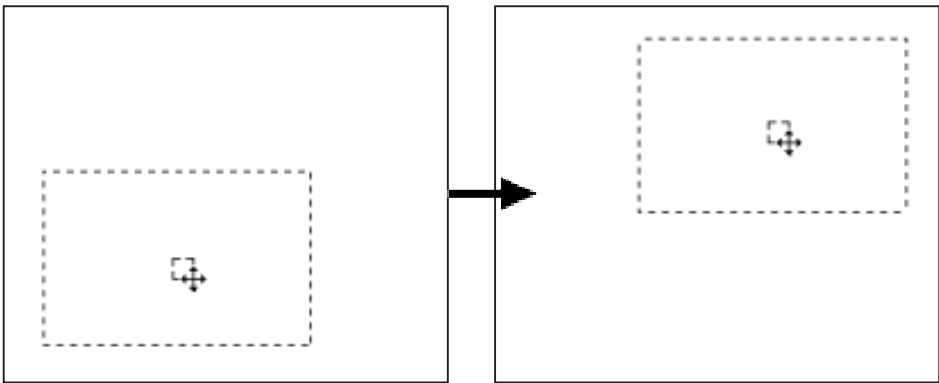
Basic operations related to selection are grouped under [Edit] (STYLOS HD) or under [Selection] (TraceMan HD, PaintMan HD) in the menu bar.

**Select All (entire layer)** [Ctrl/Cmd] + [A]  
Selects the entire image (layer).

**Deselect** [Ctrl/Cmd] + [D]  
Cancels the current selection and nothing remains selected thereafter.

**Reverse Selection** [Ctrl/Cmd] + [Shift] + [I]  
Inverts a selection.  
Currently unselected areas become selected and vice versa.

**Move Selection**  
Placing the mouse pointer inside a selection when the [Selection] tool is selected changes the mouse pointer shape, and allows you to move the selection by dragging.



### Tips

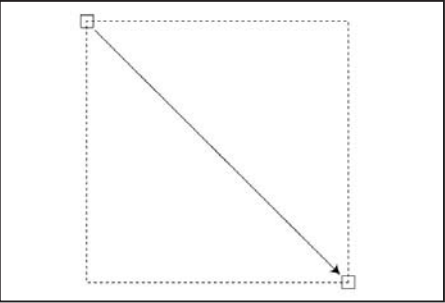
- A selection can be made using the [Selection] tool on the [Tool Palette], the [Edit] menu in the menu bar (STYLOS HD), or the [Selection] menu (TraceMan HD, PaintMan HD).
- Pressing the [Shift] key before clicking changes the selection mode to [Add to Selection].
  - Pressing the [Alt] key before clicking changes the selection mode to [Subtract from Selection].
  - Pressing the [Shift] + [Alt/Opt] keys before clicking changes the selection mode to [Intersect with Selection].
  - Pressing the [Shift] key when dragging the shape fixes the aspect ratio.
  - Pressing the [Shift] key when rotating, fixes the angle to 45 degrees.
  - Pressing the [Shift] key when moving limits the movement direction to horizontal or vertical.
  - Pressing the [Shift] key when [Polyline] is selected changes the selection tool to [Lasso].
  - Pressing the [Shift] key when [Lasso] is selected changes the selection tool to [Polyline].

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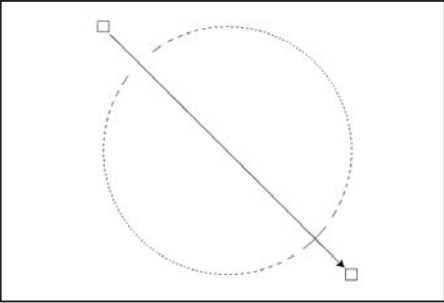
Rectangle Selection tool  

Allows you to select a rectangular or elliptical area. The selection is shaped around the line (diagonal) you drew by dragging. The [Tool Options Palette] allows you to toggle between [Rectangle] and [Ellipse].

 Rectangular selection



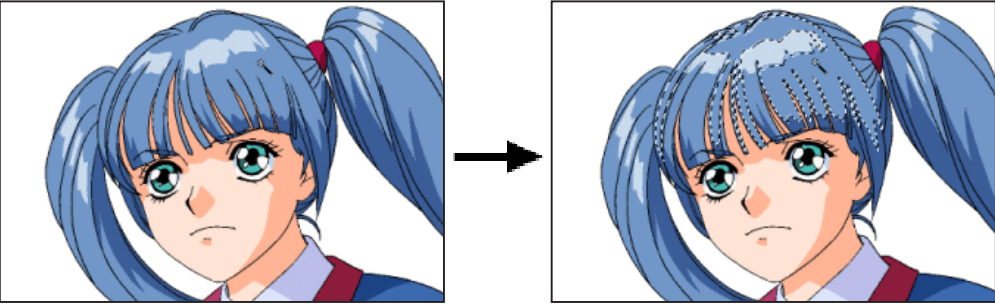
 Elliptical selection



Drag with the [Shift] key held down to draw a rectangle or ellipse.

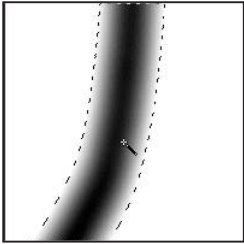
Magic Wand tool  

Allows you to select all connected parts having the same color as the clicked pixel.



Using [Magic Wand] on [Gray Paint Layer]

On the [Gray Paint Layer], the tool selects the stretch of area of the same color as the clicked gray line.



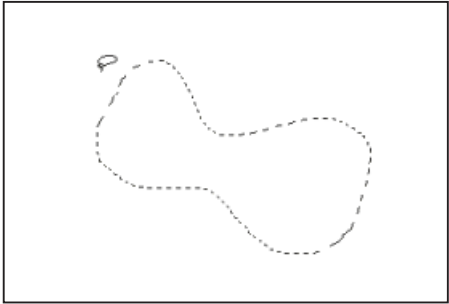
Lasso tool  

Allows you to select an area you bordered by moving the mouse pointer freely from a starting point (the first clicked point).

The [Tool Options Palette] allows you to toggle between [Lasso] and [Polyline].

 Lasso

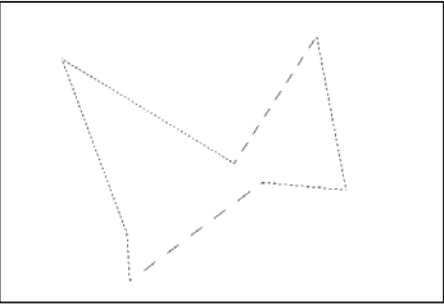
The selection is the area you enclosed by dragging in one freehand trace.



If you stop dragging leaving an open segment in the selection border, that segment is drawn as a straight line that goes from the point you stopped to the starting point.

 Polyline

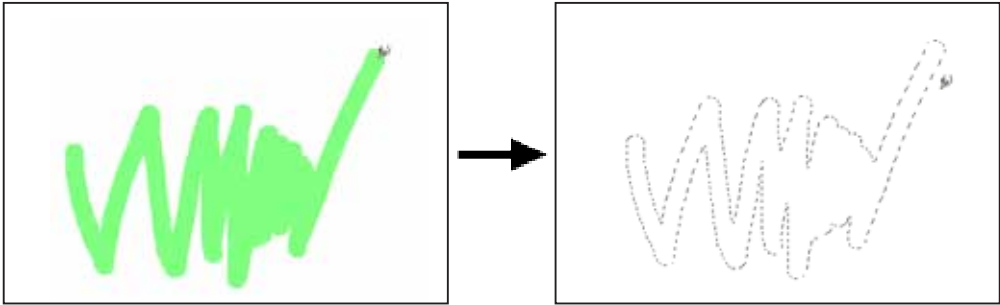
The selection is the area enclosed by a polygon whose vertices are determined by each mouse click you did while moving the selection tool.



If you double click leaving an open segment in the selection border, that segment is drawn as a straight line that goes from the point you double clicked to the starting point.

Selection Brush tool  

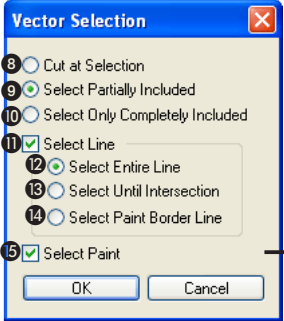
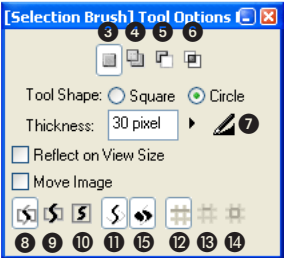
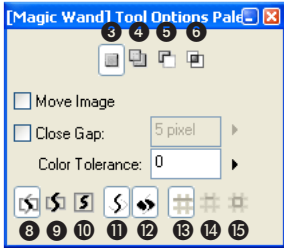
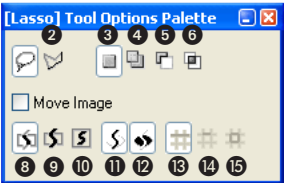
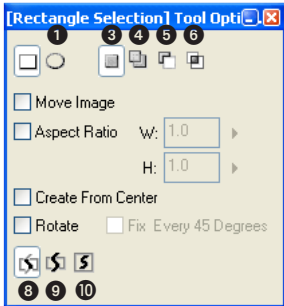
The selection is the area you traced with a brush-like pointer.



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[Selection] tool options palette

The [Tool Options Palette] under the [Window] menu allows you to configure the detailed settings for the [Selection] tool.

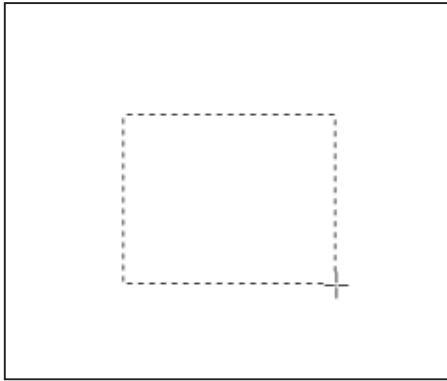


Opens when [Settings] → [Vector Selection...] is selected from the [Edit] menu.

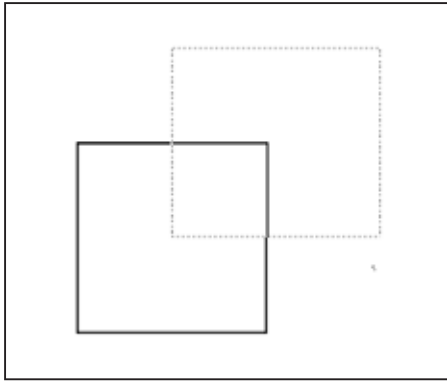
- 1 **Ellipse (common)**  
Makes an elliptical selection.
- 2 **Polyline (common)**  
Makes a polygonal selection.
- 3 **New Selection (common)**  
This is the normal setting where a new selection cancels the existing one.
- 4 **Add to Selection (common)**  
This option allows you to add a selection to the existing one so that you can edit multiple parts simultaneously. Making a new selection overlapping an existing one joins the two in a new selection. Holding down the [Shift] key when a different tool option is selected changes the selection mode to this one for that time.

- 5 **Subtract From Selection (common)**  
Making a new selection overlapping an existing one cancels the overlapped part from the existing selection. Holding down the [Alt/Opt] key when a different tool option is selected changes the selection mode to this one for that time.
- 6 **Intersect with Selection (common)**  
Making a new selection overlapping an existing one results in a new selection with only the overlapped part.
- Move Image (common)**  
Moves the image on the selected plane along with the selection when moving the selection by dragging.
- **[Aspect Ratio] (Only rectangle selection tool)**  
Allows you to specify and fix the height-to-width ratio for rectangular and elliptical selections.
- **[Create From Center] (Only rectangle selection tool)**  
Normally, the starting point for drawing the border is the upper-left corner. Selecting this option, moves the starting point to the center.
- **[Rotate] (Only rectangle selection tool)**  
Allows you to rotate the rectangle or ellipse by moving the mouse pointer once the sizes are fixed, and confirm by clicking at the desired position.
- **[Fix Every 45 Degrees] (Only rectangle selection tool)**  
This is an option for [Rotate]. Fixes the rotation to units of 45 degrees.
- **[Close Gap] (Only magic wand tool)**  
Makes the selection to ignore small gaps in the line(s) that are smaller than a specified tolerance.
- **[Color Tolerance] (Only magic wand tool)**  
The higher the value, the wider the range of colors considered the same.
- **[Thickness] (Only selection brush tool)**  
Allows you to specify the thickness of the brush-like pointer.
- **[Reflect Pen Pressure on Thickness] (Only selection brush tool)**  
Reflects the graphics tablet pen pressure in the line thickness.
- 7 **[Reflect on View Size] (Only selection brush tool)**  
Shows the view in the same size as in 100% view even when the screen view is scaled.
- 8 **[Cut at Selection] (Only vectors)**  
Deletes the selected parts.
- 9 **[Select Partially Included] (Only vectors)**  
Selects also those included in the selection partially.
- 10 **[Select Only Completely Included] (Only vectors)**  
Selects those included completely in the selection.
- 11 **[Select Line] (Only vectors with PaintMan HD)**  
When OFF, excludes lines (Outline plane, Color Separation Line plane) from a selection. This option is convenient for selecting only color when working with multiple planes.
- 12 **[Select Entire Line] (Only vectors with PaintMan HD)**  
Selects the entire line.
- 13 **[Select Until Intersection] (Only vectors with PaintMan HD)**  
Selects the part of a(the) line(s) up to the intersection(s) with another.
- 14 **[Select Paint Border Line] (Only vectors with PaintMan HD)**  
Selects the color borders.
- 15 **[Select Paint] (Only vectors with PaintMan HD)**  
When OFF, excludes colors (Coloring Plane). This option is convenient for selecting only lines when working with multiple planes.

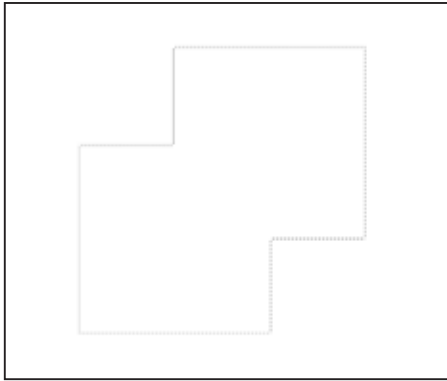
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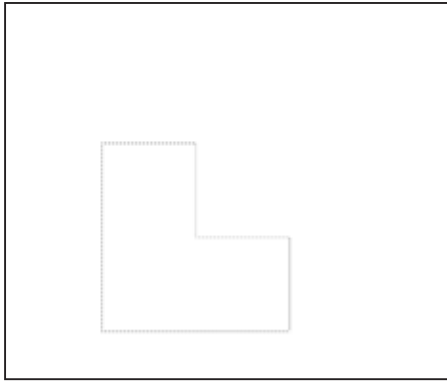
• [New Selection] (common)



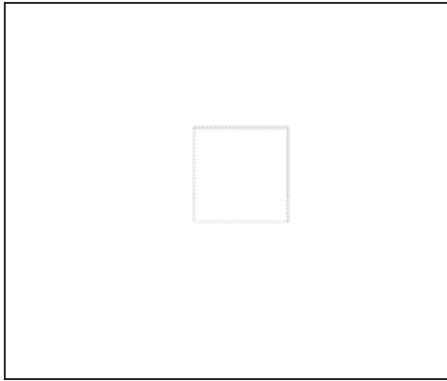
• Original image



• [Add to Selection] (common)



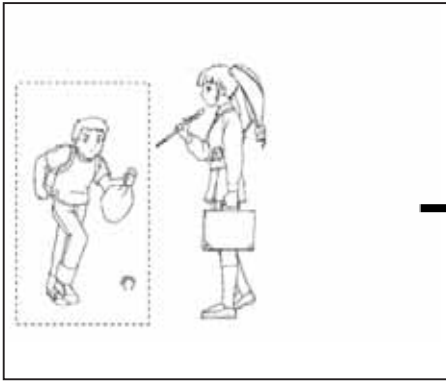
• [Subtract from Selection] (common)



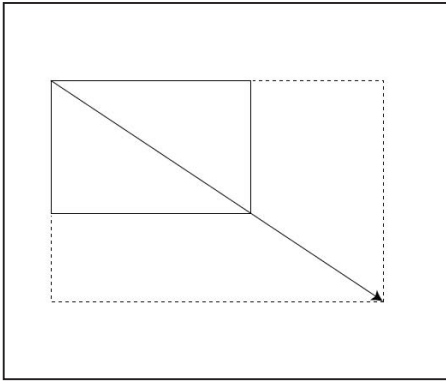
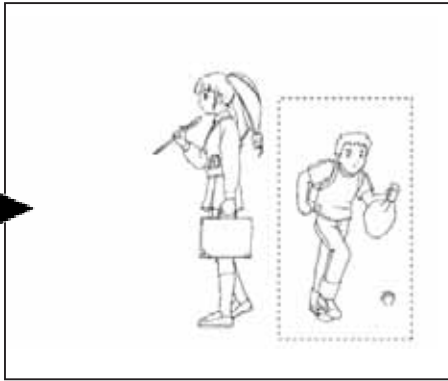
• [Intersect with Selection] (common)

Tips

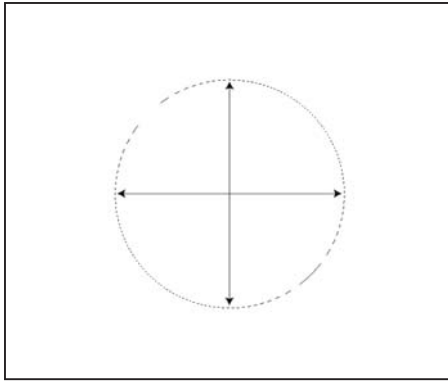
- Dragging with the [Shift] key held down draws a rectangle or circle.
- Dragging with the [Ctrl/Cmd] key held down draws a rectangle or circle centered at the point where you placed the mouse pointer first.



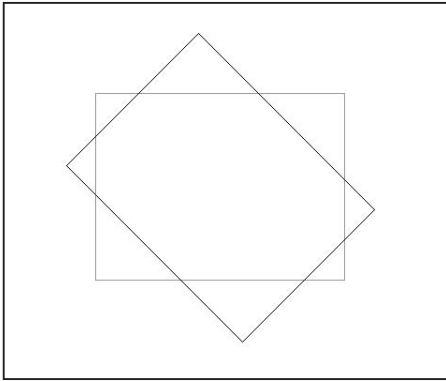
• [Move Image] (common)



• [Aspect Ratio] (Only rectangle selection tool)



• [Create From Center] (Only rectangle selection tool)

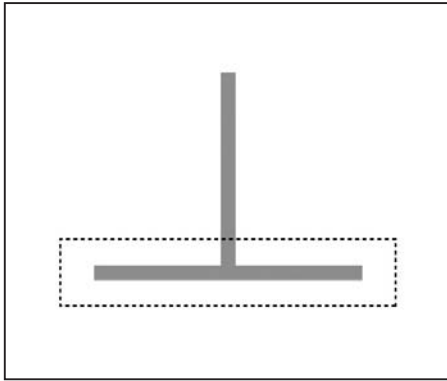


• [Rotate] (Only rectangle selection tool)

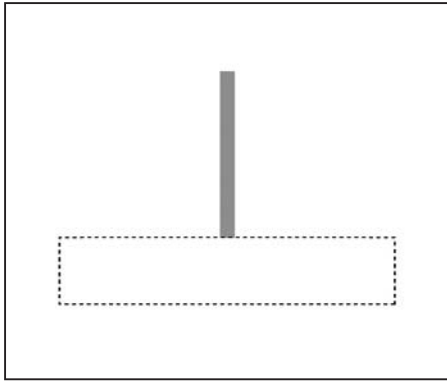
Tips

- The [Color Locator] (only TraceMan HD and PaintMan HD) allows you to measure the position of the selection as well as its size.

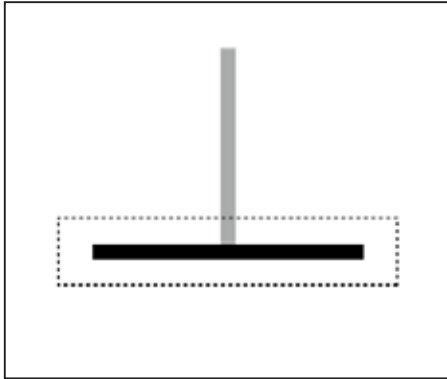
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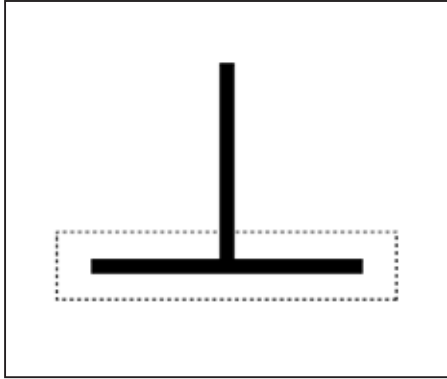
• Original image



• [New Selection] (only vectors)



• [Add to Selection] (only vectors)



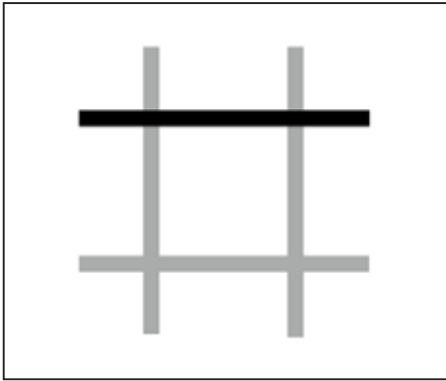
• [Subtract from Selection] (only vectors)



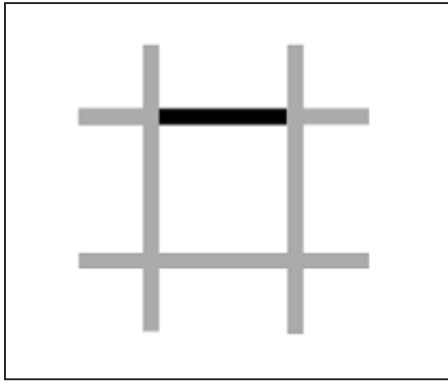
• [Select Paint] OFF  
(Only vectors with PaintMan HD)



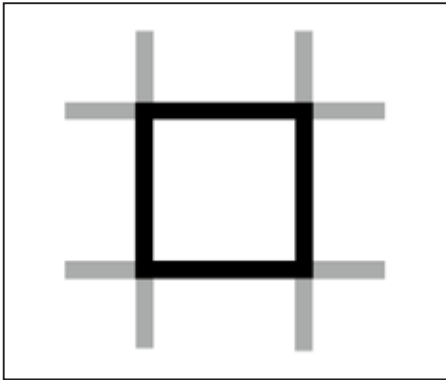
• [Select Line] OFF  
(Only vectors with PaintMan HD)



• [Select Entire Line]  
(only when [Select Line] for vectors is ON)



• [Select Until Intersection]  
(only when [Select Line] for vectors is ON)



• [Select Paint Border Line]  
(only when [Select Line] for vectors is ON)

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Selections using foreground color

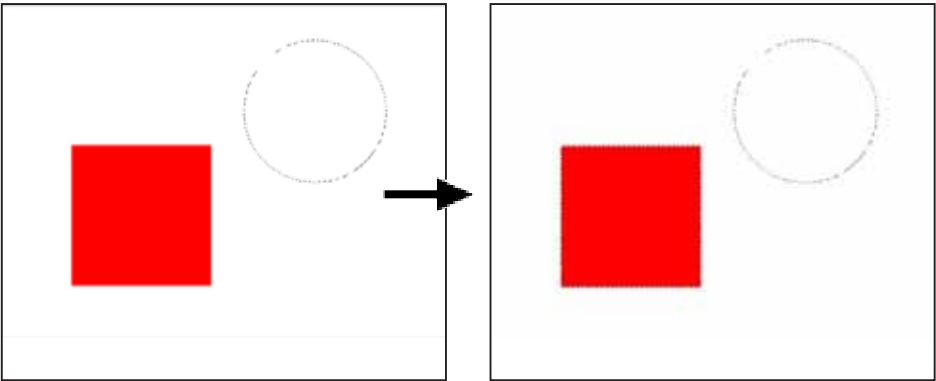
Operations related to selections that make use of the foreground color are grouped under [Selection].

Select Foreground Color [Ctrl/Cmd] + [U]

Selects all parts drawn with the current foreground color.

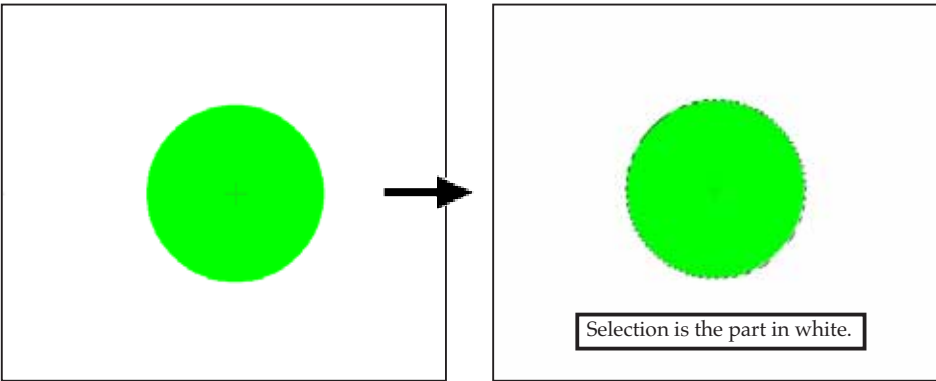
Add Foreground Color to Selection [Ctrl/Cmd] + [Shift] + [U]

Adds the parts drawn with the current foreground color to the current selection.



Select Other Than Foreground Color [Ctrl/Cmd] + [Y]

Selects all parts drawn with other than the current foreground color.



Tips

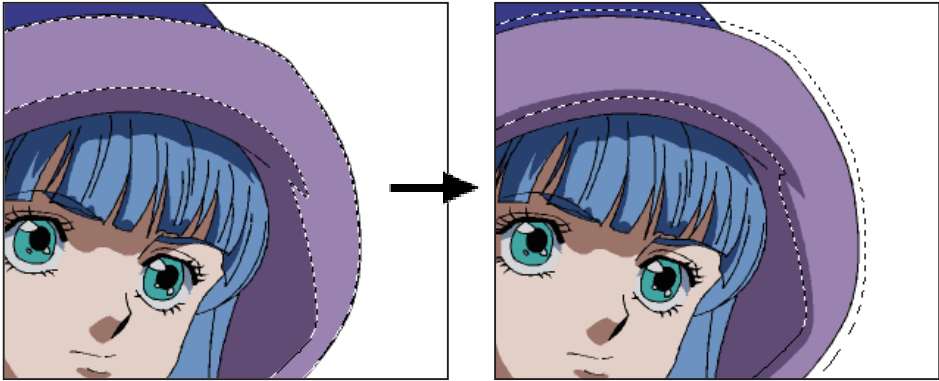
Selecting [Add Foreground Color to Selection] when a "part drawn with the current foreground" has a part in common with the "current selection" creates a selection that is addition of both.

Expanding/Reducing a selection

The [Expand Selection] and [Reduce Selection] allows you to select whether to [Expand Selection] or [Reduce Selection].

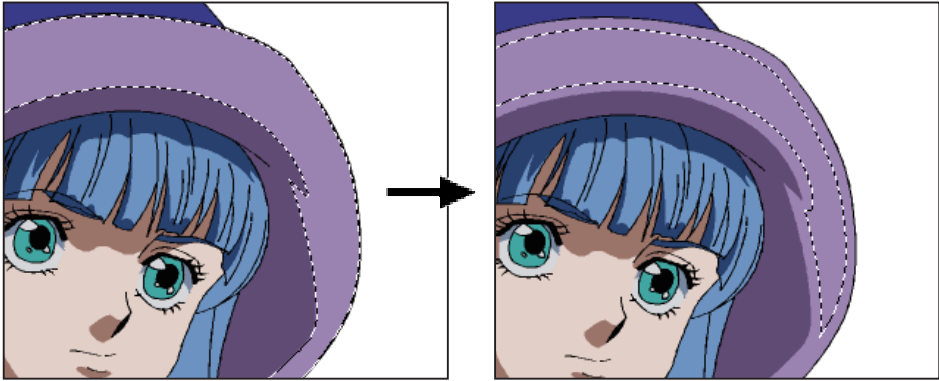
Expanding a selection

Expands the current selection by a specified width.



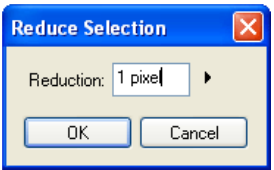
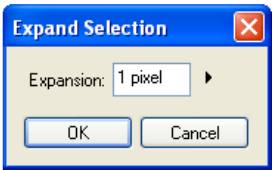
Reducing a selection

Reduces the current selection by a specified width.



Expand Selection/Reduce Selection dialog box

Selecting the menu item shows the following dialog box. Specify either [Expansion] or [Reduction] as appropriate.



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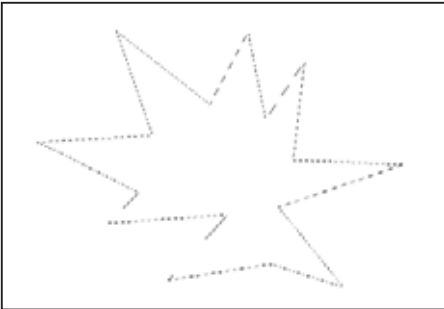
# Saving a selection

## Converting a selection to layer (Saving)

The procedure for converting the selection into a [Selection Layer] and saving is as follows.

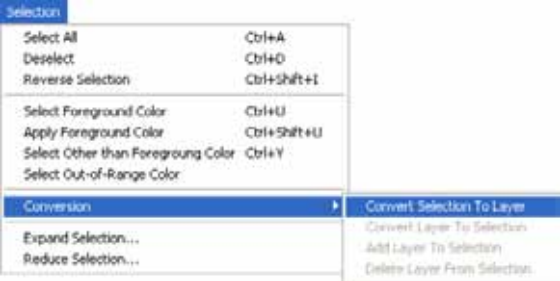
### 1. Select the target selection.

Select the selection you want to save.



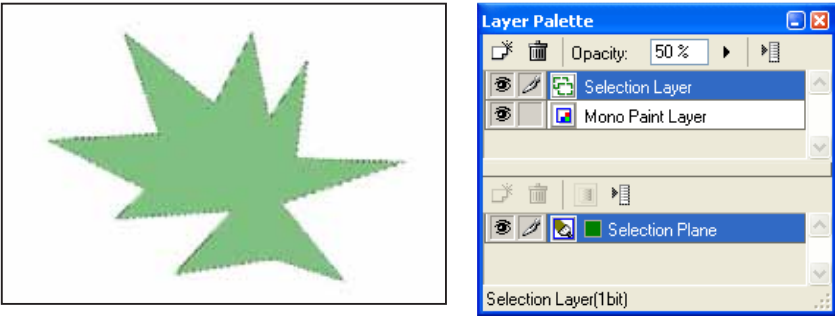
### 2. Select the command.

Select [Conversion] → [Convert Selection To Layer] from the [Selection] menu.



### 3. Completion

A new [Selection Layer] and [Selection Plane] are created and added to the [Layer Palette].

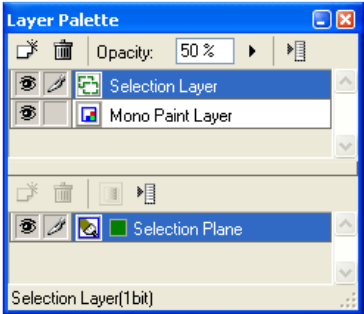


## Converting a layer to selection (Loading)

The procedure to load a [Selection Layer] and convert to a selection is as follows.

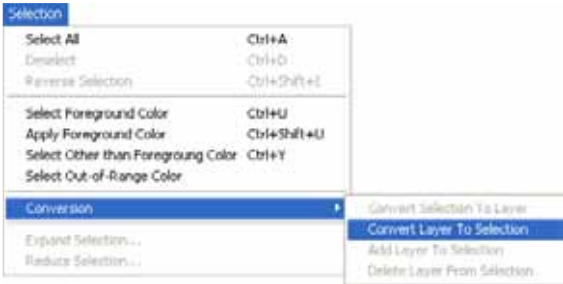
### 1. Select the selection layer.

Select the target [Selection Layer] from the [Layer Palette] then open the saved selection.



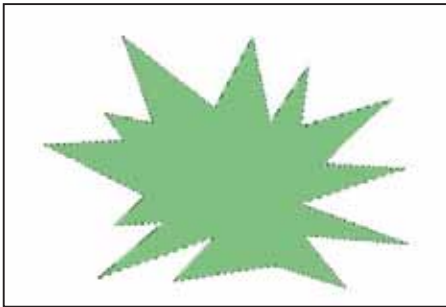
### 2. Select the command.

Select [Conversion] → [Convert Layer To Selection] from the [Selection] menu.



### 3. Completion

A selection is created based on the colored area of the [Selection Layer].



### Tips

For selecting a particular selection from a selection layer with multiple selections, use [Shift] + [Magic Wand].

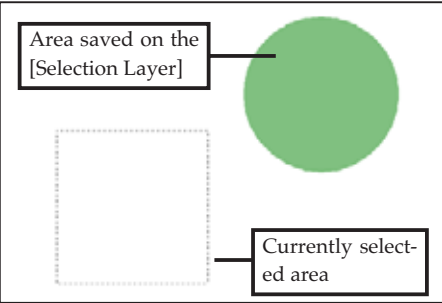
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Adding a selection layer to a selection

The procedure for adding a selection from a [Selection Layer] to a selection in the [Cel] window is as follows. (With [Convert Layer To Selection], the existing selection is overwritten.)

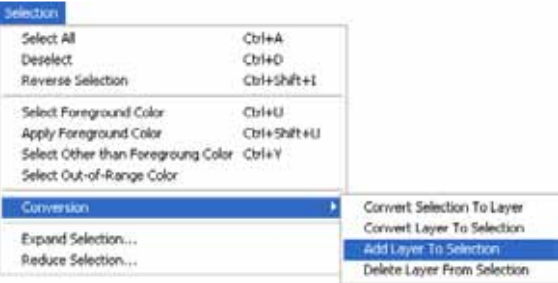
1. Select the selection layer.

Select [Selection Layer] from the [Layer Palette] and open the saved selection you want to add to the selected image.



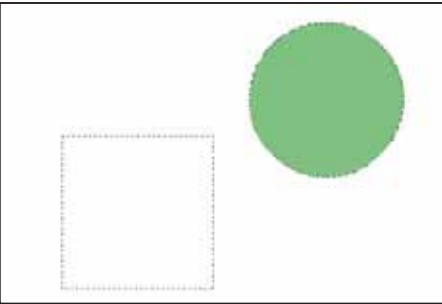
2. Select the command.

Select [Conversion] → [Add Layer To Selection] from the [Selection] menu.



3. Completion

A selection is created based on the colored area of the [Selection Layer] and added to the existing selection.



Tips

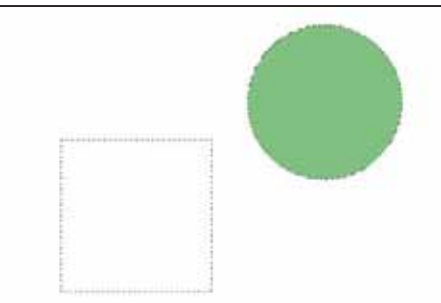
If the image on the [Selection Layer] has a part in common with the existing selection, the created selection is the addition of both.

Deleting a selection layer from a selection

The procedure for deleting the part that overlaps with the colored area of the [Selection Layer] from the selection in the [Cel] window is as follows.

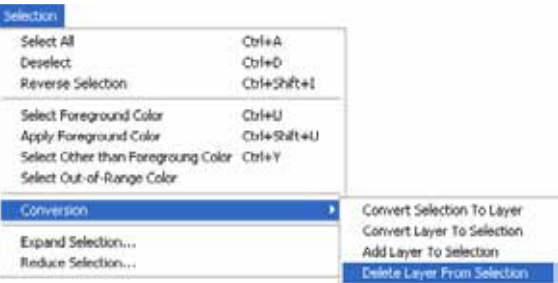
1. Select the selection layer.

Select [Selection Layer] from the [Layer Palette] and open the saved selection you want to add to the selected image.



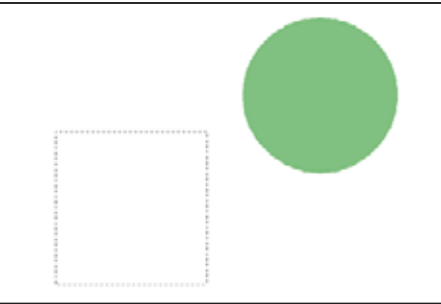
2. Select the command.

Select [Conversion] → [Delete Layer From Selection] from the [Selection] menu.



3. Completion

The part in the existing selection that overlaps with the colored area of the [Selection Layer] is deleted.



Tips

If the image on the [Selection Layer] has a part in common with the existing selection, the created selection is the part that remains from the deduction of the parts in common.

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# Cutting and Pasting

## Basic operations using Cut & Paste

Basic operations related to Cut & Paste are grouped under the [Edit] menu.

### Cut [Ctrl/Cmd] + [X]

Cuts the image in a selection (deletes the original image and sends it to the buffer). The cut image is sent to the copy buffer (clipboard). This image can be pasted to the [Cel] window using the [Paste] command. The [Cut] command can only cut images on the current layer.

### Copy [Ctrl/Cmd] + [C]

Copies the image in a selection (keeps the original image and sends it to the buffer). The [Copy] command can only copy images on the current layer.

### Paste [Ctrl/Cmd] + [V]

Pastes the image in the buffer stored by a [Cut]/[Copy] command, or another application to the [Cel] window. An image pasted when the [Selection] tool is selected can be moved by drag and drop. An image in the buffer can be pasted any number of times until it is overwritten by another. The [Paste] command can only paste to the current layer.

The RETAS!PRO paste function pastes an image with its position (coordinates) kept. However, this is valid only when pasting within RETAS!PRO.

### Paste to Selected Plane [Ctrl/Cmd] + [Shift] + [V]

Pastes an image in the buffer stored by a [Cut]/[Copy] command, or another application to a [Plane] on the [Layer Palette] you selected. The [Paste to Selected Plane] command pastes to the current plane.

### Convert & Paste [Ctrl/Cmd] + [Alt/Opt] + [V]

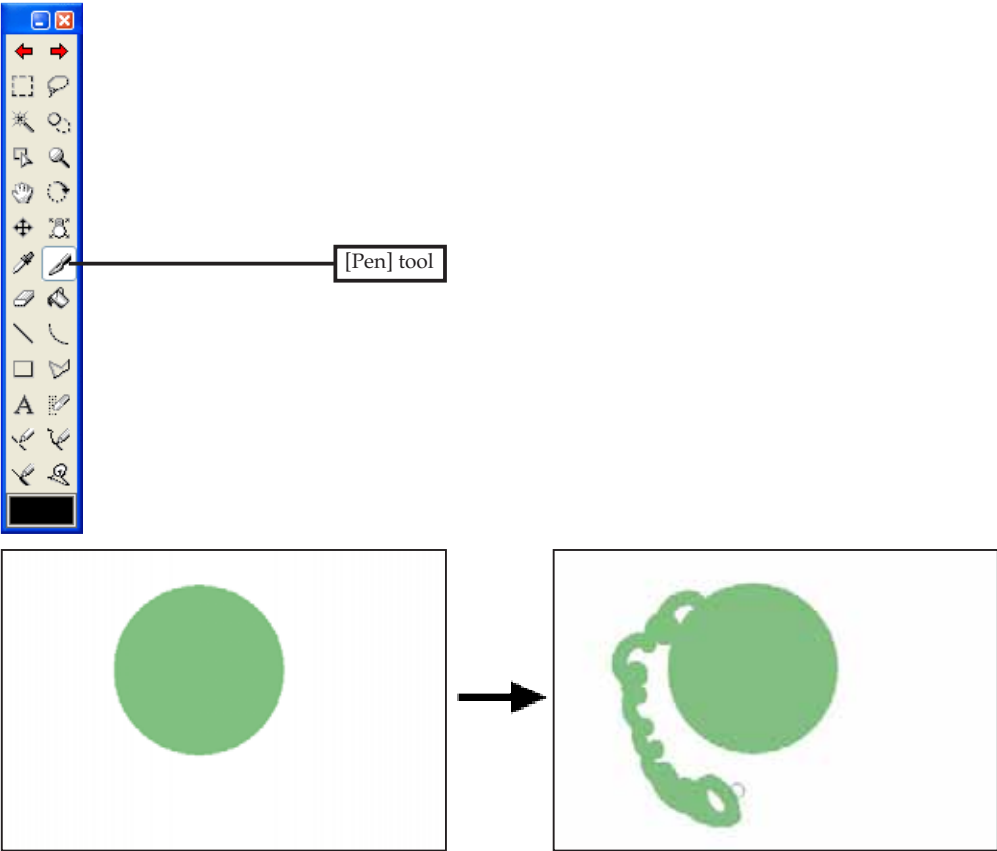
Converts an image in the buffer stored by a [Cut]/[Copy] command, or another application and pastes it to a new layer or a new plane.

### Clear [Delete]

Deletes the image in the selection. The [Clear] command is valid only on the current layer.

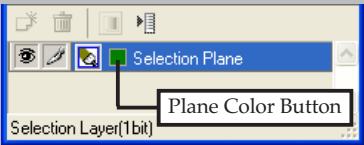
## Drawing a selection

Saved selections can be edited. That is, you can expand a selection saved on the [Selection Layer] by drawing with the [Pen] tool, for example, or reduce by erasing with the [Eraser] tool.



## Tips

Foreground color of a [Selection Layer] is changeable. For changing the color, click the [Plane Color] button for the [Selected Plane] on the [Layer Palette] to open the [Color Settings] or [Color] dialog box that allows you to select the color.

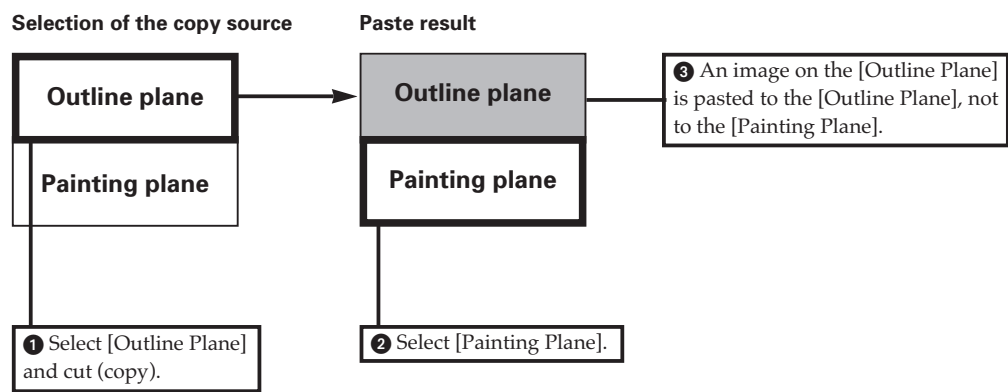


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Cut & Paste Specifications in RETAS!PRO HD

The RETAS!PRO [Copy] command also stores the layer and plane attributes of the original (copy source) image. So, even if a different layer and plane is selected in the paste destination, paste is done to a layer and plane having the same attribute as the source.

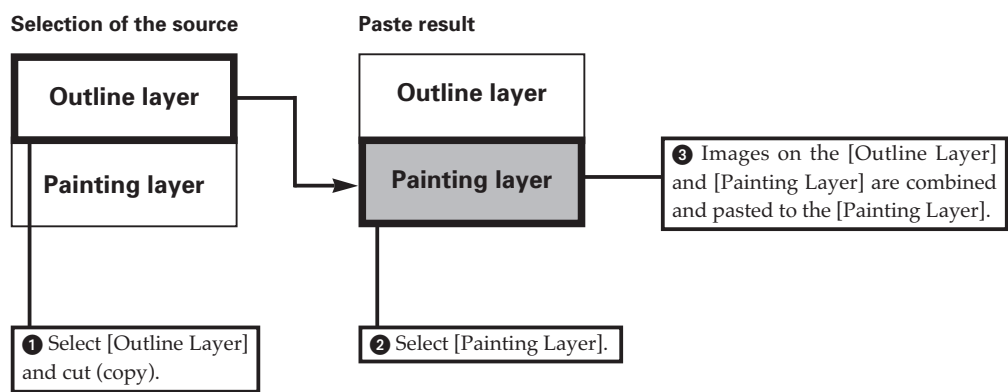
Operation flow example



Reference: Cut & Paste Specifications in Ver. 5

In RETAS!PRO Ver. 5, paste is done to the specified layer irrespective of the copy source image attributes.

Operation flow example



Tips

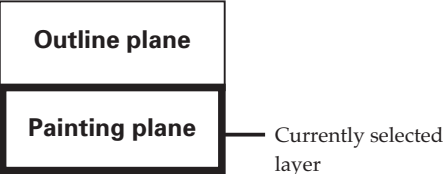
- To paste to a layer and plane with different attributes in a condition like the indicated above, see "Pasting to a specified layer" in this chapter. When pasting an outline plane drawing with gray line, the pixels of the source and destination images are compared, and pasted using the darker one. This is as selecting [Darken Blend] in CoreRETAS or Photoshop. Therefore, if the image includes parts where the gray line color (reference color) has been changed using the [Color Replace] tool, the finish of parts where gray lines overlap may have poor quality.
- When cutting and pasting gray lines, do the cut and paste with all gray lines having the same color (reference color) and use [Color Replace] tool afterwards to keep quality.

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Selecting a copy source layer in RETAS!PRO HD

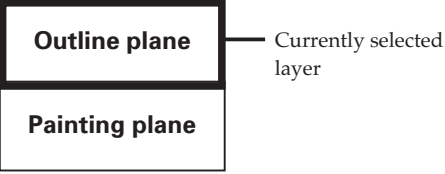
The logic for storing an image to the copy buffer when doing a copy in RETAS!PRO HD is as follows.

If [Painting Plane] is selected, the image is stored to the copy buffer with the [Painting Plane] as the only copy destination.



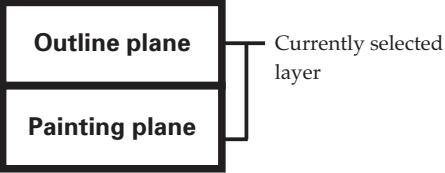
[Painting Plane] image

If [Outline Plane] is selected, the image is stored to the copy buffer with the [Outline Plane] as the only copy destination.



[Outline Plane] image

If both [Painting Plane] and [Outline Plane] are selected, the image is stored to the copy buffer with the [Painting Plane] and [Outline Plane] as copy destinations.

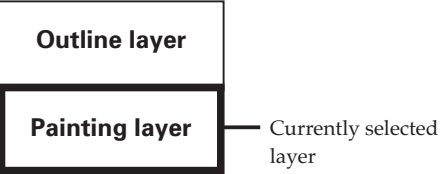


[Painting Plane] + [Outline Plane] image

Reference: Selecting a copy source layer in Ver. 5

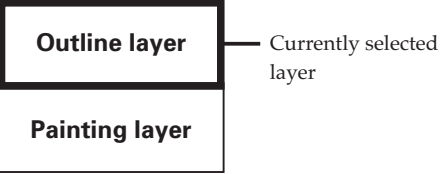
The logic for storing an image to the copy buffer when doing a copy in RETAS!PRO Ver. 5 is as follows.

If [Painting Layer] is selected, an overlap of the [Paint Layer] and [Outline Layer] images is stored to the copy buffer.



[Painting Plane] + [Outline Plane] image

If [Outline Layer] is selected, only the [Outline Layer] image is stored in the copy buffer.



[Outline Plane] image

Tips

To do a copy similar to that in Ver. 5 with RETAS!PRO HD, you need to select both the [Painting Plane] and [Outline Plane].

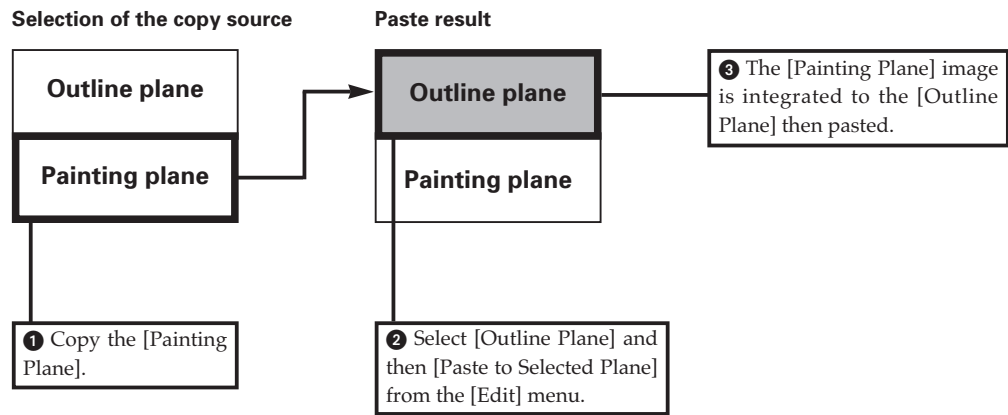
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Pasting to a specified layer

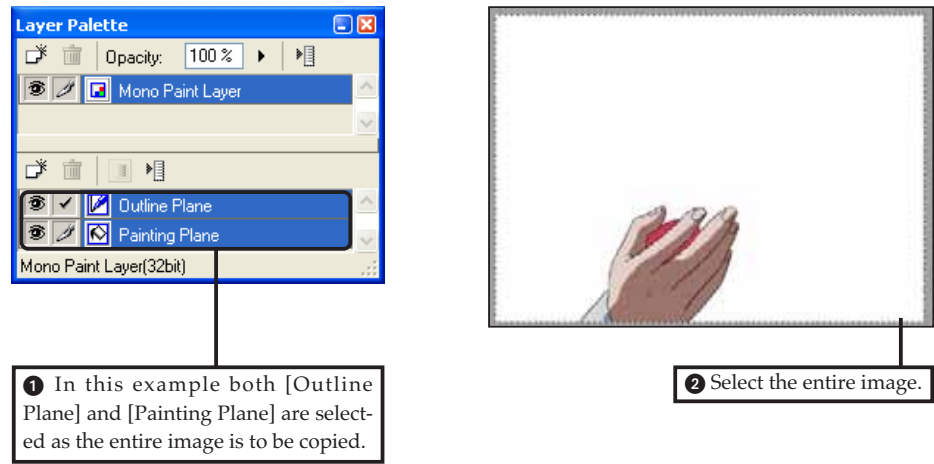
The procedure for copying to a layer and plane with different attributes using [Paste to Selected Plane] is as follows.

[Paste to Selected Plane] example



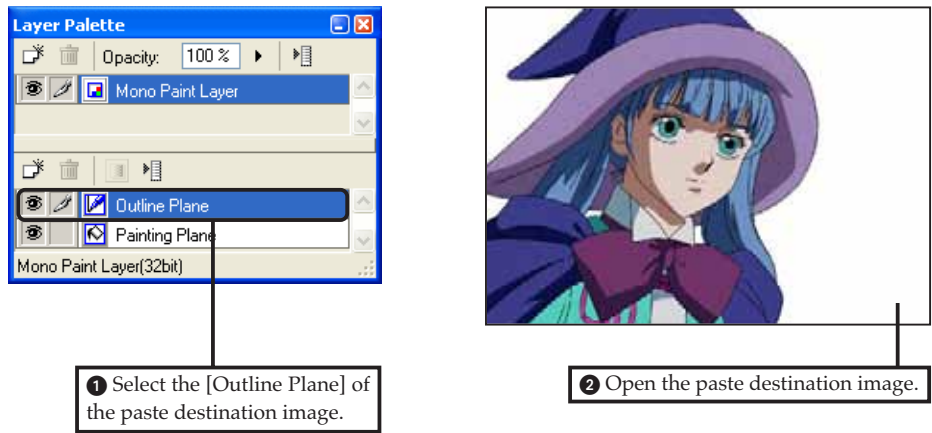
1. Open the copy source layer.

Select the plane that contains the image you want to copy from the [Layer Palette]. Select the whole [Cel] window and copy.



2. Select the paste destination plane.

Select the plane to which you want to paste the image from the [Layer Palette].

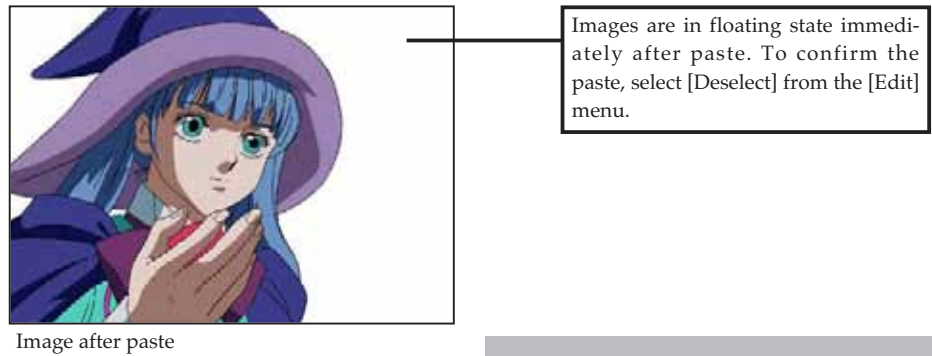


3. Select [Paste to Selected Plane].

Select [Paste to Selected Plane] from the [Edit] menu.

4. Completion

The image is pasted to the selected plane.



Tips

Dragging on the [Cel] window immediately after paste (when the image is in floating state) moves the image position.

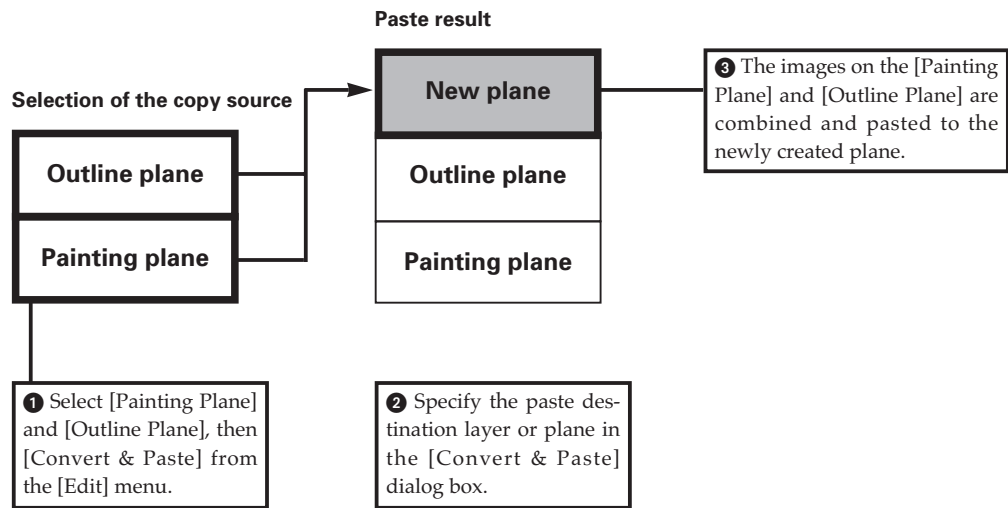
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Pasting to a new layer

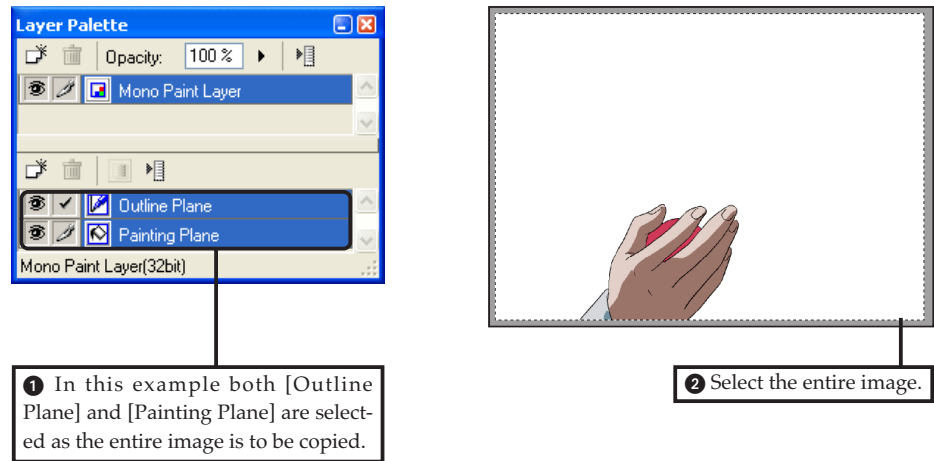
The procedure for pasting to a newly created layer and plane using [Convert & Paste] is as follows.

[Convert & Paste] example



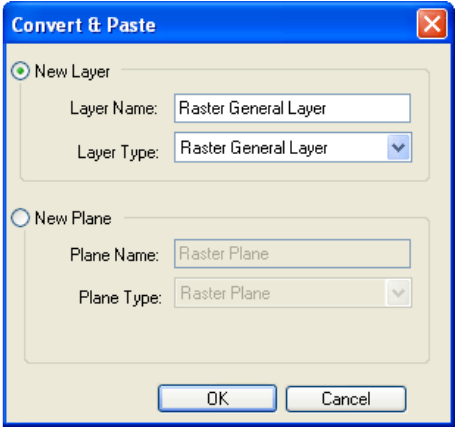
1. Open the copy source layer.

Select the plane that contains the image you want to copy from the [Layer Palette]. Select the whole [Cel] window and copy.



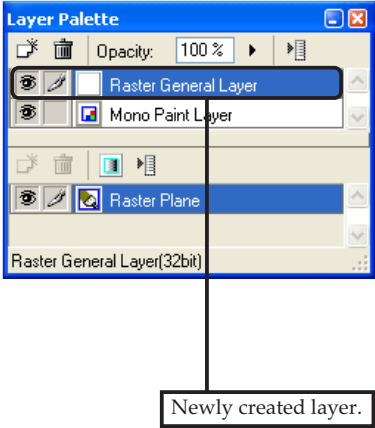
2. Select [Convert & Paste].

Select [Convert & Paste] from the [Edit] menu. The [Convert & Paste] dialog box appears. You can select the destination for the conversion (layer or plane) by selecting the corresponding radio button.



3. Completion

A new plane is created and the image pasted there.



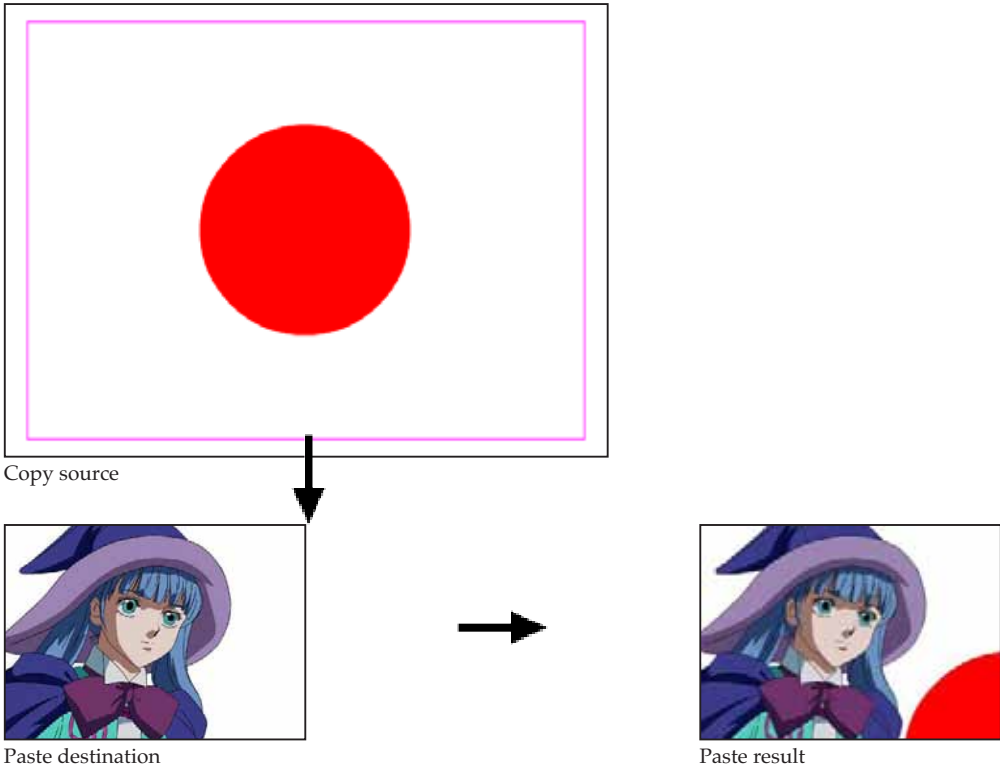
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Position of a pasted image

In paste, the coordinates in the copy source are kept.



The coordinates are kept even when the copy source coordinates are larger than those of the paste destination.



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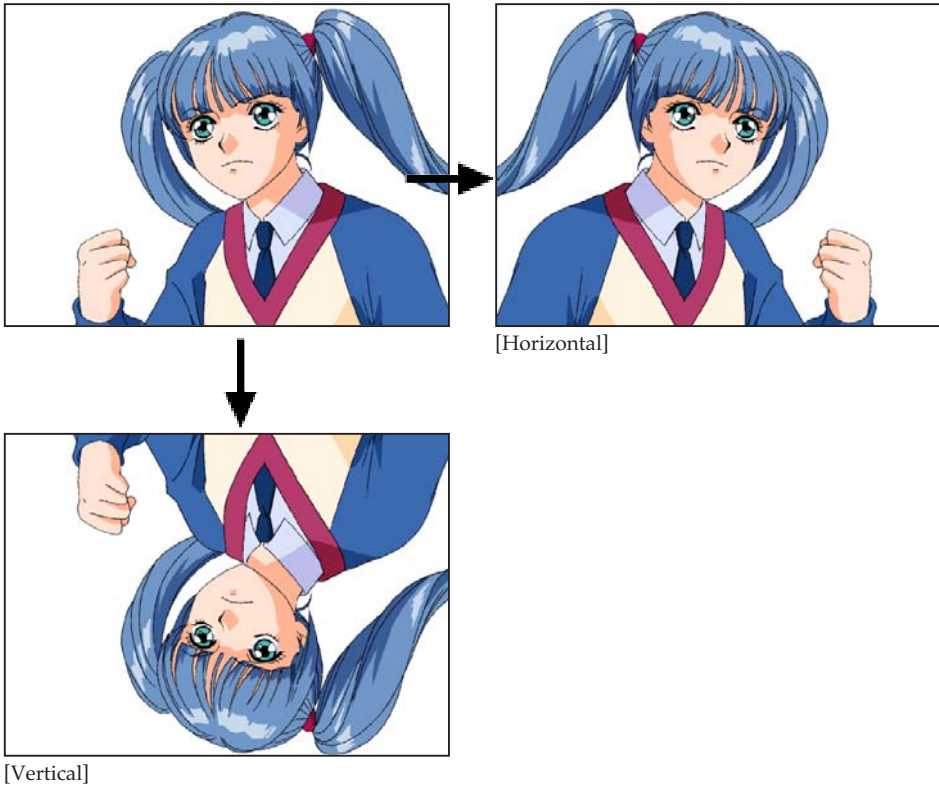
# Chapter **11**

## Editing Images

# Transforming an image entirely

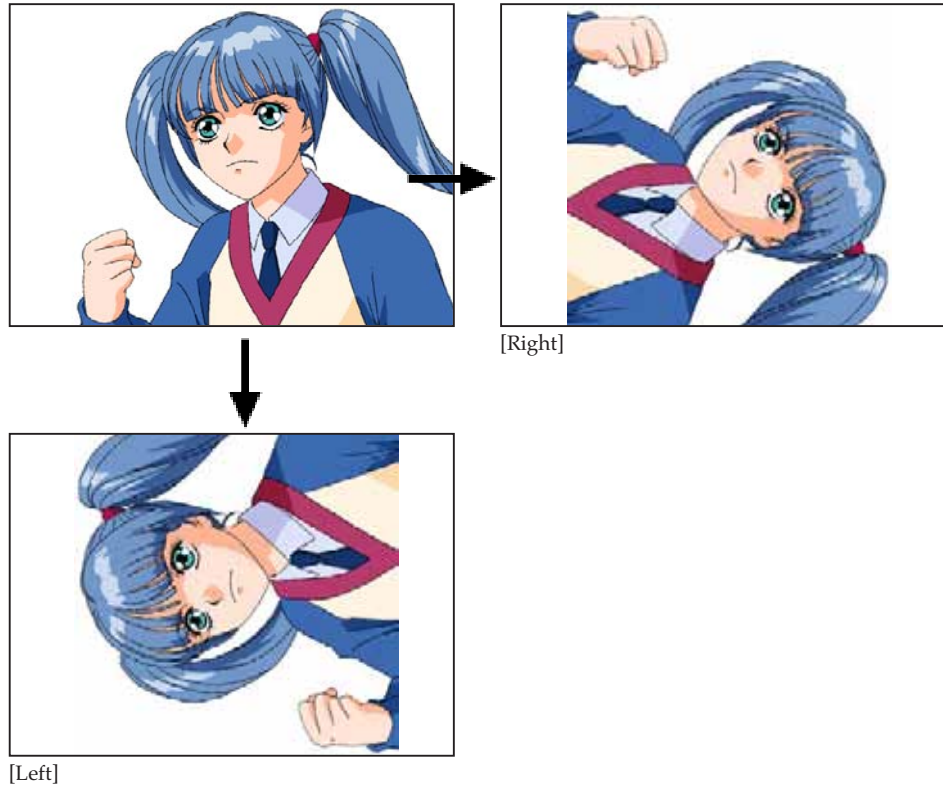
## Mirror [Cel] → [Mirror] → [Horizontal]/[Vertical]

Inverts an image in the horizontal or vertical direction.



## Rotate [Cel] → [Rotate] → [Left]/[Right]

Rotates the image in 90 degrees.



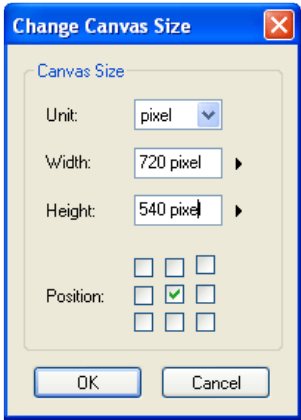
### Tips

Transform commands under the [Cel] menu or the [Edit] menu not only modifies the way an image is shown on the screen but the actual data as well. Be careful not to confuse with the reverse or rotate commands under the [View] menu or in the [Tool Bar].

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Changing the canvas size

Select [Canvas Size...] from the [Cel] menu. The [Change Canvas Size] dialog box that allows you to change the canvas size appears.

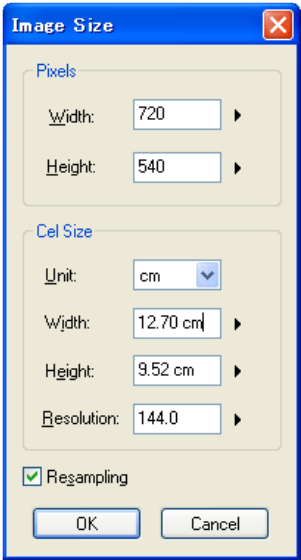


[Canvas Size]

- **[Unit]**  
Allows you to specify the unit for the canvas size.
- **[Width]**  
Allows you to specify the width of the image.
- **[Height]**  
Allows you to specify the height of the image.
- **[Position]**  
Allows you to specify the position of the original image with respect to the new image.

Changing the image size

Select [Image Size...] from the [Cel] menu. The [Image Size] dialog box that allows you to change the resolution of the image appears.



[Pixels]

- **[Width]**  
Allows you to change the width of the image in pixels.
- **[Height]**  
Allows you to change the height of the image in pixels.

[Cel Size]

- **[Unit]**  
Allows you to select a [Unit] from cm, mm, and inch.
- **[Width]**  
Allows you to change the width of the image.
- **[Height]**  
Allows you to change the height of the image.
- **[Resolution]**  
Allows you to select an image size.
- **[Resampling]**  
If deselected, allows you to change the image size without changing the number of pixels.

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Copying a selection

The procedure for copying a selection which is convenient when you need multiple copies of the same image is as described below.



Original image



Image with a pasted and displaced copy.

1. Make a selection.

Select the image you want to copy or move using the [Selection] tool.



2. Select the command.

Select [Cut] or [Copy] from the [Edit] menu then select [Paste] from the [Edit] menu for the paste destination layer to paste the copy of the image.

|                         |              |
|-------------------------|--------------|
| Edit                    |              |
| Undo                    | Ctrl+Z       |
| Redo                    | Ctrl+Shift+Z |
|                         |              |
| Cut                     | Ctrl+X       |
| Copy                    | Ctrl+C       |
| Paste                   | Ctrl+V       |
| Paste to Selected Plane | Ctrl+Shift+V |
| Convert & Paste...      | Ctrl+Alt+V   |
| Clear                   | Delete       |

Tips

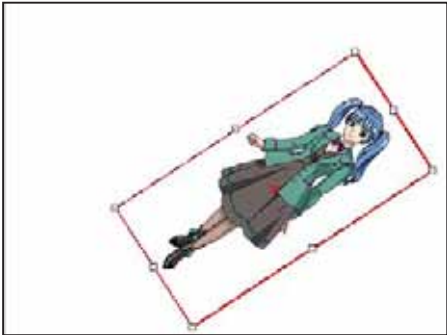
The copy of an image is pasted to the same coordinates as the original image. To change the position of the image, drag with the [Move] tool.

Transforming a selection

To edit an image partially, make a selection then select [Transform] from the [Edit] menu and execute one of the commands as indicated in the procedure below. Note that these transformations are different from those using the tool bar or the [View] menu in the sense that they not only change the way an image is shown on the screen but the image data as well.



Original image



[Rotate]



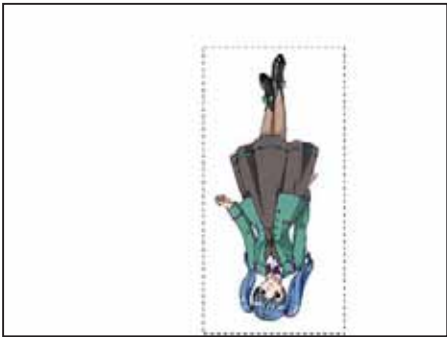
[Zoom In]



[Zoom Out]



[Flip Horizontal]



[Flip Vertical]

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1. Make a selection.

Specify the area of the image you want to edit using the [Selection] tool.



2. Select the command.

Select [Transform] from the [Edit] menu then the command you want to execute. If you select [Scale...] or [Rotate...], a [Transform] dialog box appears. (if you select [Flip Horizontal] or [Flip Vertical], the command is executed)



3a. Transform by configuring the Transform dialog box settings.

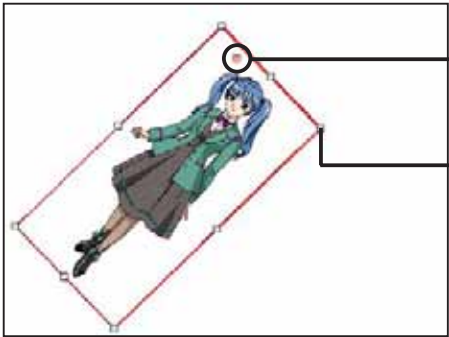
Configure the detailed settings. You can configure while confirming the result in the [Cel] window which acts as a preview.



- **[Move]**  
Allows you to specify the horizontal position (X) and the vertical position (Y) for the move.
- **[Scale]**  
Allows you to specify the scale as a relation between [W] (width) and [H] (height) in %.
- **[Fix Aspect Ratio]**  
Selecting this check box allows you to resize by keeping the aspect ratio constant.
- **[Center Point]**  
Allows you to select the position of the center point for the transformation from among [Top-left], [Top-right], [Center], [Bottom-left], and [Bottom-right].
- **[Rotate]**  
Allows you to change the rotation angle.

3b. Transform by dragging.

Drag the red frame directly to scale and/or rotate the selection.

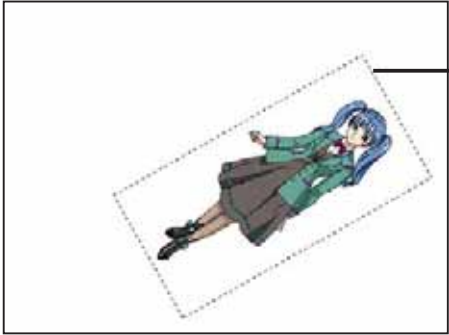


Drag the [Center Point] to move the center of rotation.

Drag the handle with the [Shift] key held down to scale with constant aspect ratio.

4. Confirm the transformation.

After changing, click [OK] to confirm the edited content.



Press [Ctrl/Cmd] + [D] (or by selecting [Selection] → [Deselect]) to deselect the selection that remains active.

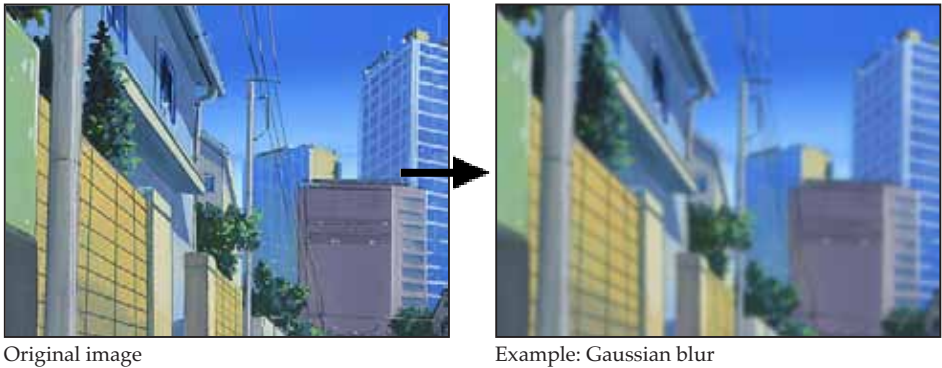
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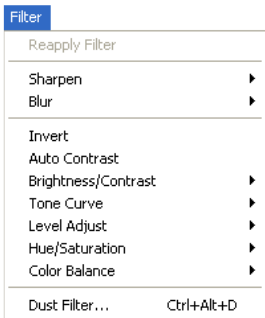
# Filter

## What is a filter?

[Filter] is a function for applying various types of compensations and/or effects to an image.



## Applying a filter



Example from PaintMan HD

### 1. Select an area.

Specify the area to which you want to add a filtering effect using the [Selection] tool. If no selection is made, the whole active plane is assumed as the filtering target.

### 2. Select the menu.

Select the command you want to execute from the [Filter] menu. [Sharpen (Heavy)], [Sharpen (Light)], [Blur (Heavy)], [Blur (Light)], [Invert], and [Auto Contrast] are filter commands that are executed immediately when selected.

### 3. Configure the detailed settings.

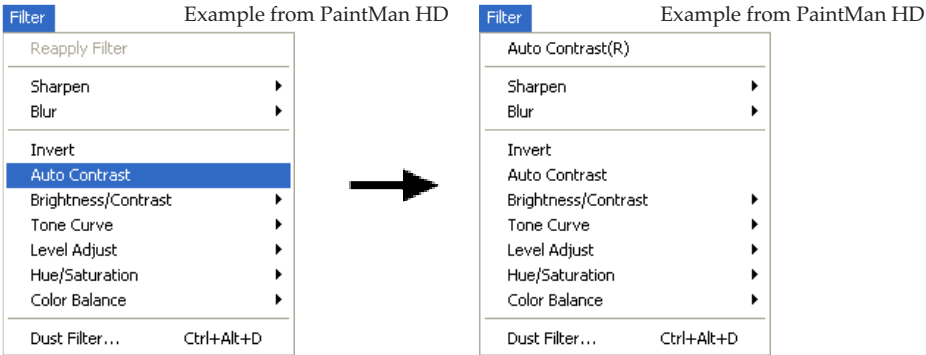
[Brightness/Contrast], [Tone Curve], [Level Adjust], [Hue/Saturation], [Color Balance], [Unsharp Mask], and [Gaussian Blur] are filter commands that need further settings. Select [Settings...] to open the settings dialog box. Adjust the parameters while confirming the result in the [Preview].

### 4. Execute.

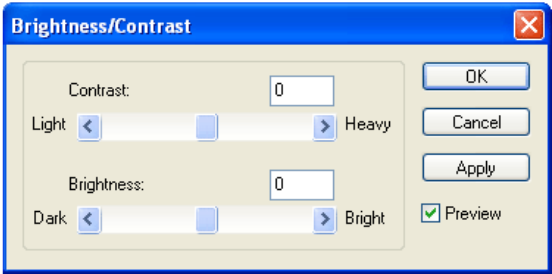
Select [Apply] under each of the commands of the [Filter] menu, or click the [Apply] button on the settings dialog box to execute the filtering.

## Re-applying a filter

When a command under the [Filter] menu is executed, that command is copied to the first row under the [Filter] menu.



## Settings dialog box: Common items



- **[OK] button**  
Saves the current settings and closes the dialog box. The image remains unchanged.
- **[Cancel] button**  
Cancels the current settings and closes the dialog box. The image remains unchanged.
- **[Apply] button**  
The image changes as settings are applied each time the button is clicked.
- **[Preview]**  
Selecting the check box allows you to make fine adjustments while confirming the preliminary result of the execution in the [Cel] window.

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Sharpen (Heavy)

[Filter] → [Sharpen] → [Sharpen (Heavy)]

Sharpens a blurry image.



Sharpen (Heavy)

Sharpen (Light)

[Filter] → [Sharpen] → [Sharpen (Light)]

Sharpens slightly a blurry image.



Sharpen (Light)

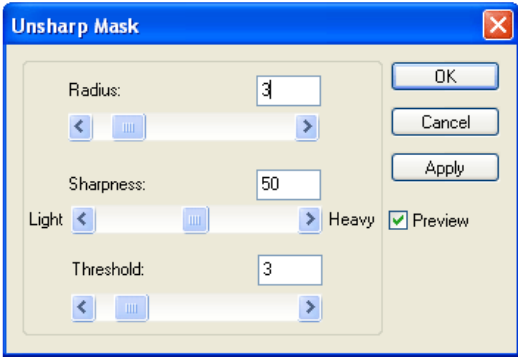
Unsharp Mask

[Filter] → [Sharpen] → [Unsharp Mask...]

Controls the [Sharpen] effect using 3 parameters.



Unsharp mask (10,50,12)



- **[Radius]**  
Allows you to specify the size of the area you want the effect to be applied.
- **[Sharpness]**  
Allows you to select the intensity of the effect.
- **[Threshold]**  
Allows you to select the minimum difference in contrast to apply the effect.

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Blur (Heavy)

[Filter] → [Blur] → [Blur (Heavy)]

Smoothes edges, very bright areas, or rough strokes in an image by averaging.



Blur (Heavy)

Blur (Light)

[Filter] → [Blur] → [Blur (Light)]

Smooths slightly edges, very bright areas, or rough strokes in an image by averaging.



Blur (Light)

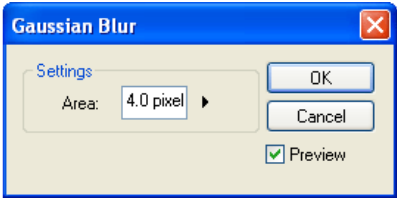
Gaussian blur

[Filter] → [Blur] → [Gaussian Blur...]

Applies a smooth blurring of an arbitrary intensity that follows the Gaussian distribution.



Gaussian blur



Tips

Pinpoint blurring is also possible using the Blur tool.

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Invert

[Filter] → [Invert]

Inverts the tones in an image.



Invert

Auto Contrast

[Filter] → [Auto Contrast]

Adjusts the image contrast automatically and makes the image clearer.



Key



After [Auto Contrast]

Tips

With TraceMan HD, applying [Auto Contrast] before trace improves the trace results. That is, if the contrast in the image is poor, the trace function may not distinguish the lines from the paper properly.

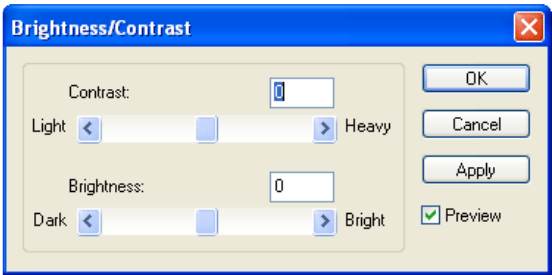
Brightness/Contrast

[Filter] → [Brightness/Contrast] → [Apply]/[Settings...]

Adjusts the brightness and contrast in an image.



Brightness/Contrast



- **[Contrast]**  
Allows you to adjust the contrast in an image. The smaller the value, the lower the contrast; and the higher the value, the higher the contrast.
- **[Brightness]**  
Allows you to adjust the brightness/darkness in an image. The smaller the value, the darker the image; and the higher the value, the brighter the image.

Tips

Creating an [Adjustment Layer] for [Brightness/Contrast] adjustment allows you to try the adjustment as many times as needed because you can make adjustments without changing the original image.

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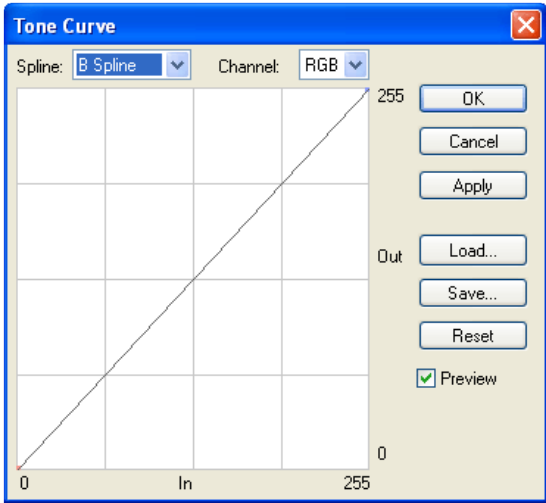
Tone curve

[Filter] → [Tone Curve] → [Apply]/[Settings...]

Allows you to change the tones in an image by manipulating the tone curve through click and drag. In the [Tone Curve], the horizontal axis is the original pixel brightness (input level) and the vertical axis, the brightness after change (output level).



Tone curve



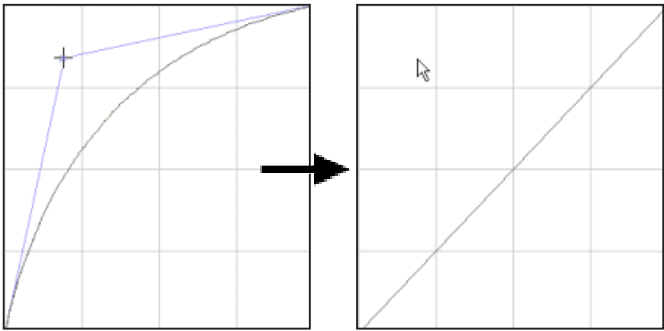
- **[Spline]**  
Allows you to select the type of curve from [B Spline] and [Bezier Curve]. (In [Bezier Curve], the number of points you can create for controlling the tones is maximum 2)
- **[Channel]**  
Allows you to select the target color plane from [RGB], [Red Only], [Blue Only], and [Green Only].
- **[Load...]**  
Loads a saved **[Tone Curve Settings File] (extension: tc2)**.
- **[Save...]**  
Saves the current [Tone Curve] settings as a **[Tone Curve Settings File] (extension: tc2)**.
- **[Reset]**  
Resets the [Tone Curve] to the default values.



[Tone Curve  
Settings File]

Clicking within the graph adds a control point you can drag for adjusting the tone curve. Shifting up the curve makes the image brighter than the original image while shifting down makes the image darker than the original image.

To remove a control point, drag it outside the graph.



Tips

Creating an [Adjustment Layer] for [Tone Curve] adjustment allows you to try the adjustment as many times as needed because you can make adjustments without changing the original image.

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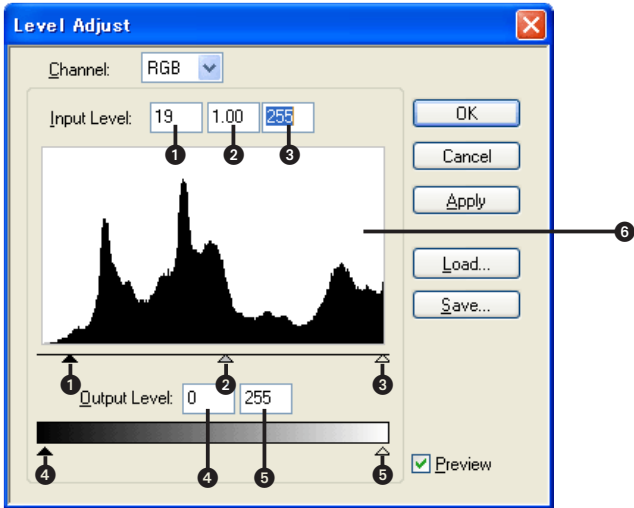
Level adjust

[Filter] → [Level Adjust] → [Apply]/[Settings...]

Allows you to adjust the tones in an image using a histogram (brightness distribution) and/or numeric entry while confirming the changes in the image in the [Preview]. Moving the triangular indicator to the right makes the image darker while moving the indicator to the left makes the image brighter.



Level adjust



- **[Channel]**  
Allows you to select the color to adjust from [RGB], [R], [G], and [B].
- ❶ **Shadow [Input Level]**  
Adjusts the darkest point input level.
- ❷ **Gamma [Input Level]**  
Adjusts the intermediate point input level.
- ❸ **Highlight [Input Level]**  
Adjusts the brightest point input level.
- ❹ **Shadow [Output Level]**  
Adjusts the darkest point output level.
- ❺ **Highlight [Output Level]**  
Adjusts the brightest point output level.
- ❻ **Histogram**  
Is a bar graph representing the distribution map from the darkest point (left side) to the brightest point (right side).
- **[Load...]**  
Loads a saved [Level Adjust Settings File] (extension: rly).
- **[Save...]**  
Saves the current settings as a [Level Adjust Settings File] (extension: rly).



[Level Adjust Settings File]

Tips

Creating an [Adjustment Layer] for [Level Adjust] allows you to try the adjustment as many times as needed because you can make adjustments without changing the original image.

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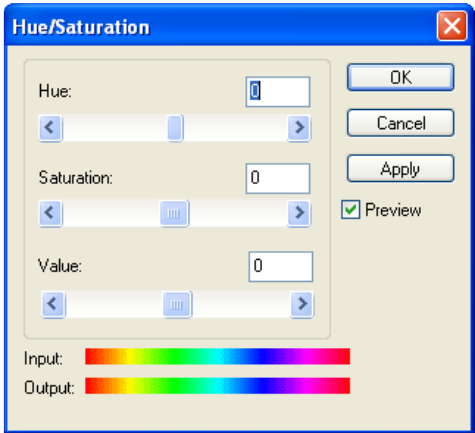
Hue/Saturation

[Filter] → [Hue/Saturation] → [Apply]/[Settings...]

Changes the color of an image by adjusting the three components of the HSV color model color, that is, hue, saturation, and value.



Hue/Saturation



- **[Hue]**  
Adjusts the specific hue of a color such as "red", "blue", etc.
- **[Saturation]**  
Adjusts the vividness of a color.
- **[Value]**  
Adjusts the brightness of a color.
- **[Input]**  
Represents the color of the image before adjustment.
- **[Output]**  
Represents the color of the image after adjustment.

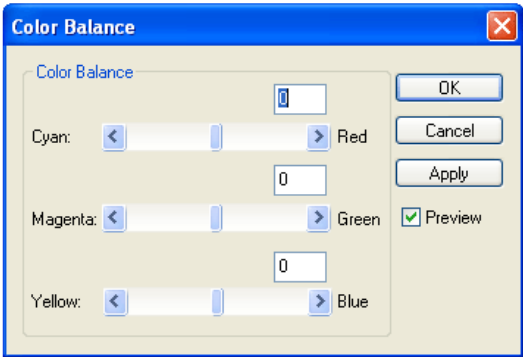
Color balance

[Filter] → [Color Balance] → [Apply]/[Settings...]

Allows you to adjust the balance between colors by manipulating the 3 sliders of complementary colors. Adjustment is also possible by entering values between -100 and +100.



Color balance



Reddish image or greenish image can be adjusted by moving the slider in the opposite direction.

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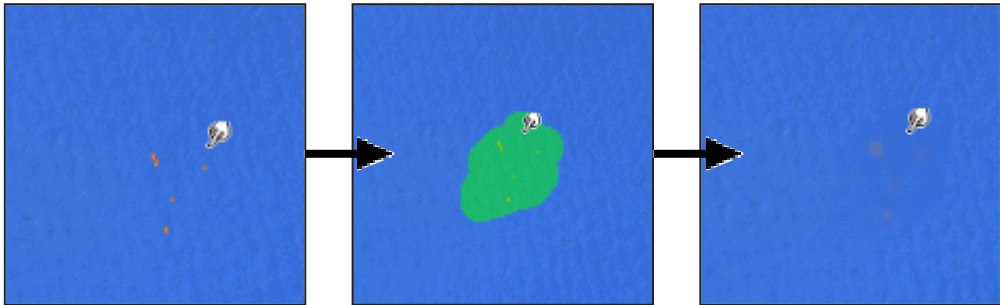


# Retouch

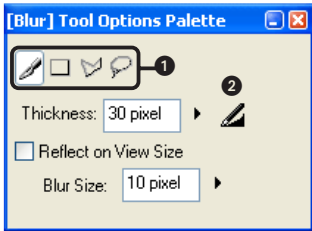
## Blur tool



Smoothes a specified portion of an image by blurring. This is useful for correcting scratches in the BG, for example.



### Blur tool options palette

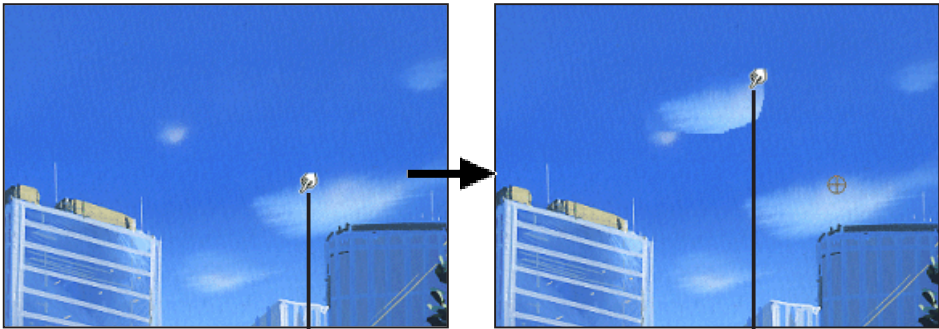


- 1 Selection Option**  
Allows you to select the mouse pointer shape from [Pen], [Rectangle], [Polyline], and [Lasso]. To select, click the corresponding icon.
  - **[Thickness]**  
Allows you to specify the thickness of the brush-like pointer.
- 2 [Reflect Pen Pressure on Thickness]**  
Reflects the pen pressure applied to the graphics tablet when drawing to the thickness of the selection made with [Pen].
  - **[Reflect on View Size]**  
Shows the view of the selection made with [Pen] in the same size as in 100% view even when the screen view is scaled.
  - **[Blur Size]**  
Allows you to specify the blurring intensity.

## Stamp tool



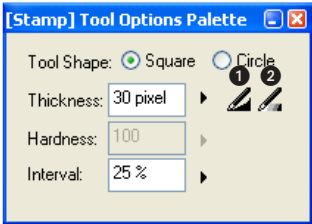
Copies a portion of an image to another part of the image. This is useful for retouching a BG. For example, you can add as many clouds and/or trees as you like naturally.



- 1** Click the source pattern with the [Alt/Opt] key held down.
- 2** Drag the mouse pointer towards a desired direction. The source pattern is pasted along the trajectory.

### Stamp tool options palette

Specifies the shape and size of the pen for the [Stamp].



- 1 [Reflect Pen Pressure on Thickness]**  
Reflects the pen pressure applied to the graphics tablet when drawing with the pen on the line thickness.
- 2 [Reflect Pen Pressure on Opacity]**  
Reflects the pen pressure applied to the graphics tablet when drawing with the pen on the opacity of the pasted image.
  - **[Tool Shape]**  
Allows you to select either of the shapes for the pen for applying the stamp tool.
  - **[Thickness]**  
Allows you to specify the thickness of the brush-like pointer.
  - **[Hardness]**  
This option is available when the tool shape is Circle. Specifying a small value makes the borders look blurry.
  - **[Interval]**  
Allows you to specify the distance between the pasted patterns. The higher the value the longer the dis-

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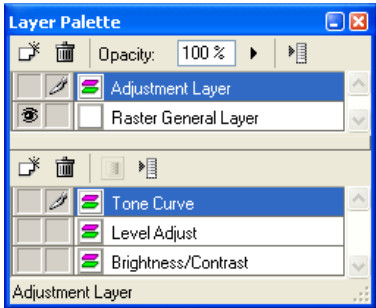
# Adjustment layer

## What is an adjustment layer?

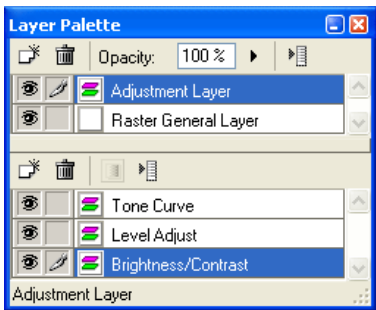
This is a layer that results from the layerization of a tone adjustment on an image. With this layer, you can retain the tone adjustments you did without changing the original image. That is, you can further change the settings as well as return to the original image.



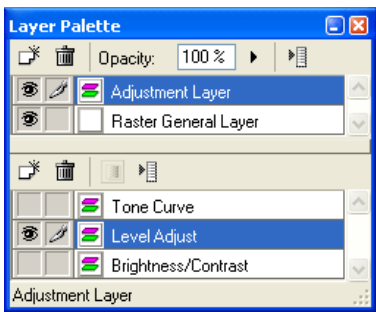
[Adjustment layer]: OFF



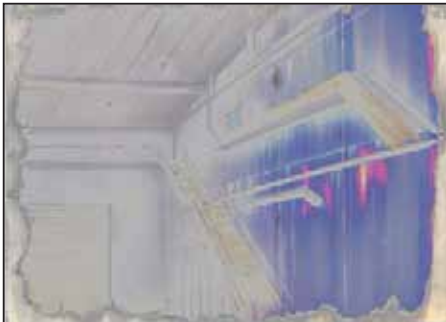
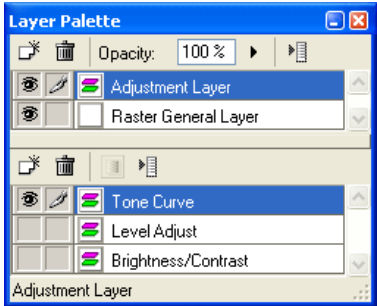
[Adjustment layer]: ON (Brightness/Contrast)



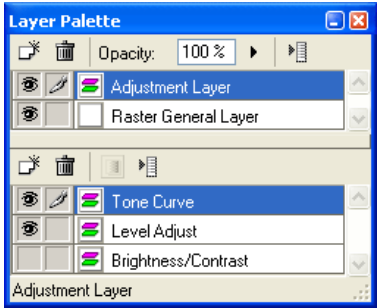
[Adjustment layer]: ON (Level Adjust)



[Adjustment layer]: ON (Tone Curve)



[Adjustment layer]: ON (Tone Curve + Level Adjust)



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Creating an adjustment layer

The procedure for creating or adding a new layer is as follows.

1. Open the image.

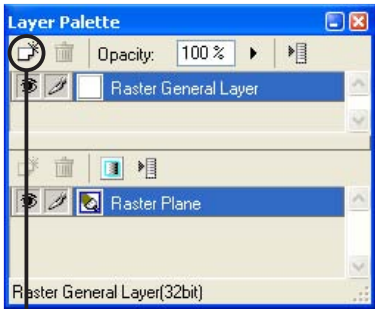
Open the image on which you want to do tone adjustment.



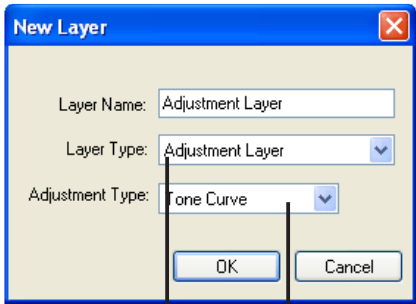
BG image before tone adjustment

2. Configure the [New Layer] dialog box settings.

Select [Layer] → [New] from the [Cel] menu. The [New Layer] dialog box appears. In the [New Layer] dialog box, select [Adjustment Layer] for [Layer Type] and the [Adjustment Type].



The [New Layer] dialog box can also be opened by clicking the [Create New Layer] button.

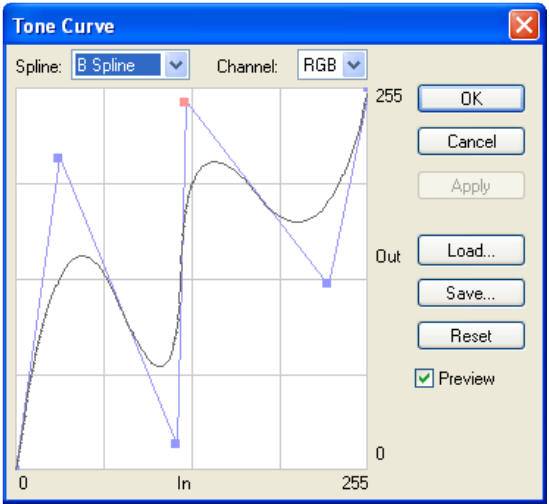


Select [Adjustment Layer].

- [Adjustment Type]
- [Brightness/Contrast]
  - [Level Adjust]
  - [Tone Curve]

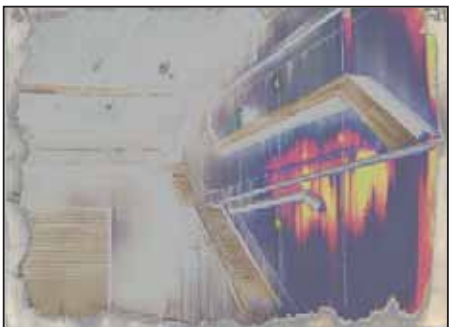
3. Configure using the dialog box.

When you click [OK], a dialog box that allows you to configure the item selected in [Adjustment Type] appears.

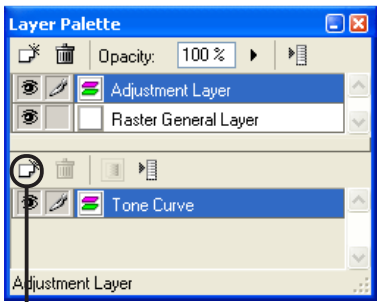


4. Completion

Click [Apply] to create the [Adjustment Layer]. The layer is added to the [Layer Palette]. The item selected in [Adjustment Type] is added as plane.



BG image after tone adjustment



A plane can also be added from the [New Plane] dialog box opened by clicking the [Create New Plane] button.

Tips

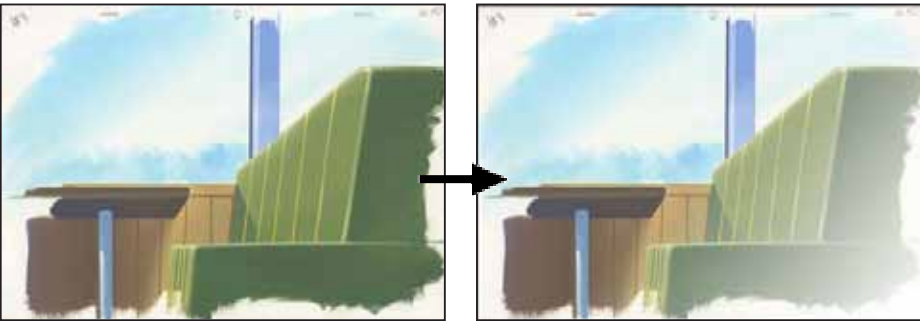
You can create multiple [Adjustment Layers] using the same procedure.

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# Alpha channel

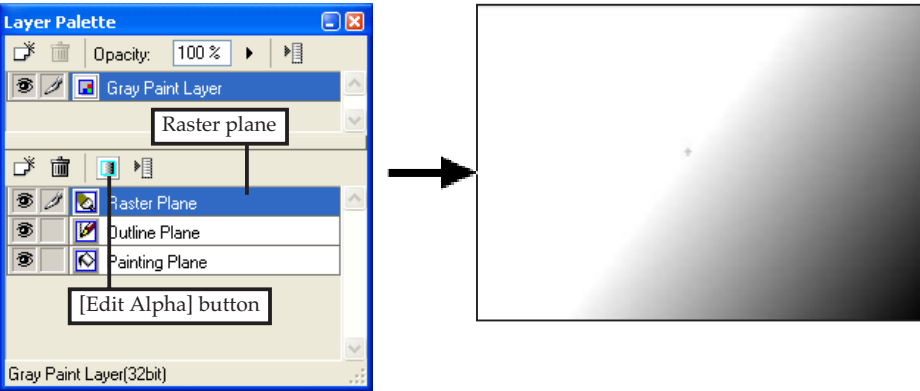
## Editing the alpha channel

The procedure for editing the alpha channel using the [Raster Plane] is as follows.



### 1. Open the alpha channel.

Select [Raster Plane] from any of the layers on the [Layer Palette]. Click the [Edit Alpha] button to open the [Alpha Channel]. There, create a mask using Gradient tool, for example.



Tips

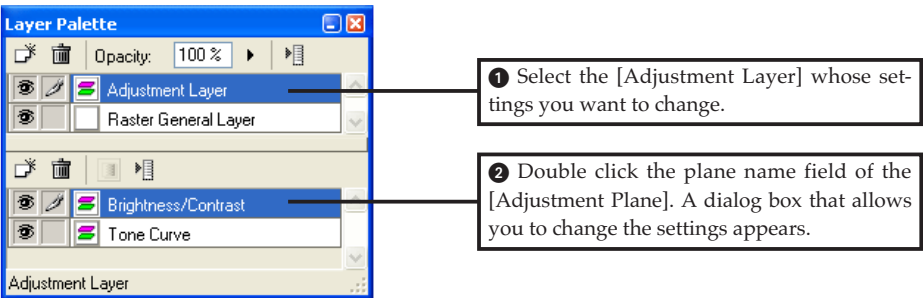
[Edit Alpha] is valid only for the [Raster Plane] of the selected layer.

## Reconfiguring the adjustment layer settings

The procedure for changing an [Adjustment Plane] settings is as follows.

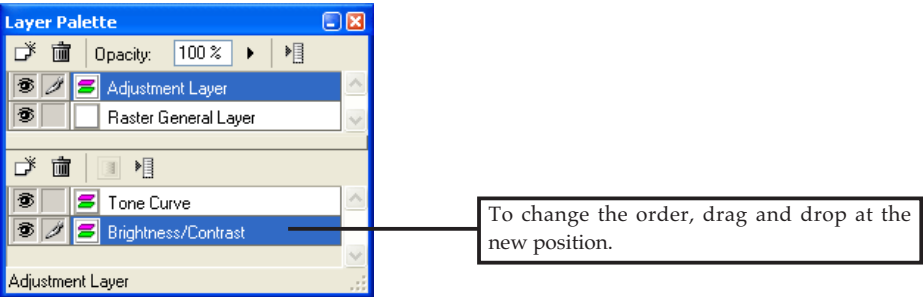
### 1. Reconfigure the Adjustment Plane settings.

Select the [Adjustment Layer] whose settings you want to change. Then select the plane from the lower part of the [Layer Palette]. Double click the plane name field to change the settings.



### 2. Change the layer/plane order.

Changing the order in which the layers and/or planes are overlapped changes the result of the effects on an image. The order can be changed between layers and between planes, but planes cannot change layers.



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RETAS!PRO

# *Chapter* **12**

## **Batch Processing**

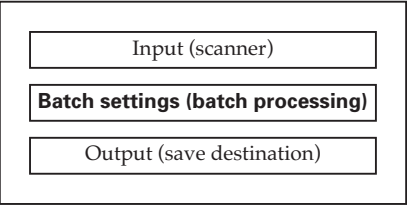


# Basic operations using Batch Processing

"Batch Processing" is a processing in which a series of predefined procedures is executed automatically. In RETAS!PRO HD, batch processing is executed using the [Batch Palette].

## Batch processing operations

The procedure for configuring [Input], [Batch Processing Items], and [Output] which are the three main components of the [Batch Palette] is as indicated below.



- 1. Configure the batch processing input settings.**  
Specify the device from which the target image data will be input.

**1 Select [Input] menu.**

**2 Select the input method.**

- **[Folder]**  
Target of the batch processing is a folder.
- **[File]**  
Target of the batch processing is a file.
- **[Sequential Cels in the Front]**  
Target of the batch processing is the sequential files within which the image currently shown in the front is included (sequential files loaded to the file previewer).

(Screen image from PaintMan HD)

- 2. Add a batch processing item.**  
You can add a batch processing item to the [Batch Palette].

**1** Click the [New Batch] button to open the [Add] dialog box.

**2** Select the batch processing item you want to add.

**3** Click [OK] to add the batch processing item to the [Batch Palette].

- 3. Configure the batch processing items and select the target layer.**  
Configure each of the batch setting items and select the target layer.

**1** Select the batch processing item to configure.

**3** Select the batch processing target layer.

Show menu

**2** Configure the settings specific to the batch processing item. For details, see:

- "Batch processing items" in this chapter.
- "Filters" in "Chapter 11".

(Screen image from PaintMan HD)

### Tips

The batch processing will not be executed if no target layer is specified for a batch processing item that has [Target:] as one of the required entries.

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4. Configure the batch processing output settings.

Specify the data output settings for the batch processing.

Batch Palette

Auto Fill

Apply Apply All

✓ Auto Fill

✓ Output

Save New

Layer Name: untitled

Number: 1

+

-

☐ Execute Separation

Format: Cel Image

Settings...

File Name: untitled0001.cel

Save D:\Documents and Se

Change Layer...

Waiting 1 seconds

☒ Confirm before Save

1 Select [Output] menu.

2 Select the save mode: [Save New], [Save Copy], or [Overwrite] (Save).

6 Enter a filename.

7 Enter a file number.

8 Select [+] if you want to increment the number for each new file to save, or select [-] if you want to decrement for each new file to save.

5 Select the image file format in which you want to save the data.

3 Select the save folder.

4 Select the save cel folder.

You can specify a waiting time until the next file is opened after completing a batch processing item.

Select this check box if you want to confirm the processing result on the image before saving the data.

Screen example from PaintMan HD

5. Execute.

Execute the batch processing when configuration of [Input], [Batch Processing Item], and [Output] including [Target] is complete.

Batch Palette

Auto Fill

Apply Apply All

✓ Input

✓ Auto Fill

Sequential Cels in the Front

Start: 1

End: 10

Click [Apply All] to execute the batch processing on all of the images selected in Input.

Click [Apply] to execute the batch processing only on the image currently shown in the [Cel] window.

(Screen image from PaintMan HD)

Saving the batch processing items list

The procedure for saving a batch processing items list is as follows. You may have multiple lists saved.

Batch Palette

Auto Fill

Apply Apply All

✓ Input

✓ Auto Fill

Sequential Cels in the Front

Start: 1

End: 10

1 Click to open the [Edit Batch Set] dialog box that allows you to edit the batch processing items list.

Batch processing items list

Edit Batch Set

Auto Fill

Color Replace

Airbrush Effect

Separation

Change Width

Add

Delete

Up

Down

Rename

OK

Cancel

2 You can add / delete a batch processing item to / from the list.

You can change the order of a batch processing item in the list.

You can rename the batch processing list.

3 Click [OK] to close the dialog.

Screen example from PaintMan HD

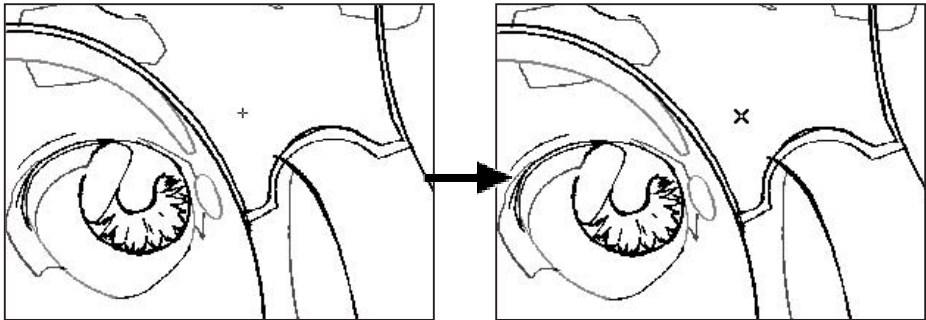
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# Batch processing items

## AutoFill

This is a function that allows you to paint all subsequent images by painting one inbetween (image). This function is also called [Skewered Painting] and is effective for painting inbetweens with few movements. The procedure for executing an AutoFill by selecting [AutoFill] from the batch processing items under the [Batch Palette] is described



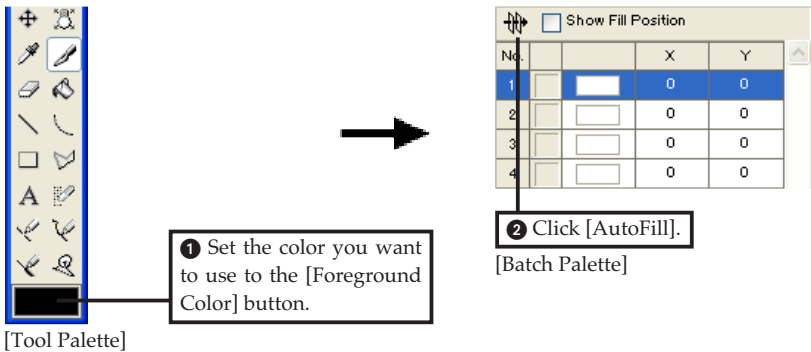
Original image

After processing

### 1. Open the Cel window.

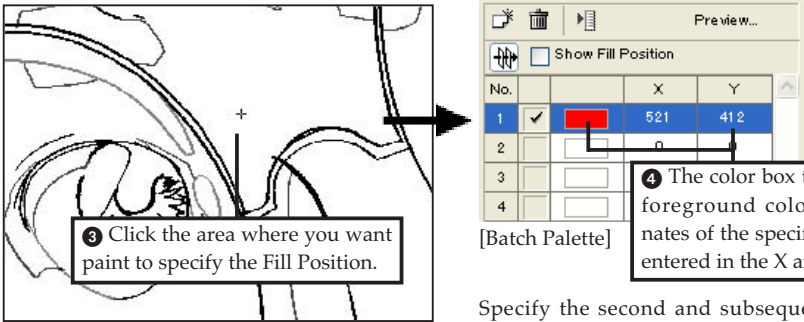
Open the window with the image on which you want to execute the processing.

### 2. Specify the color and the fill position (first color).



[Tool Palette]

[Batch Palette]



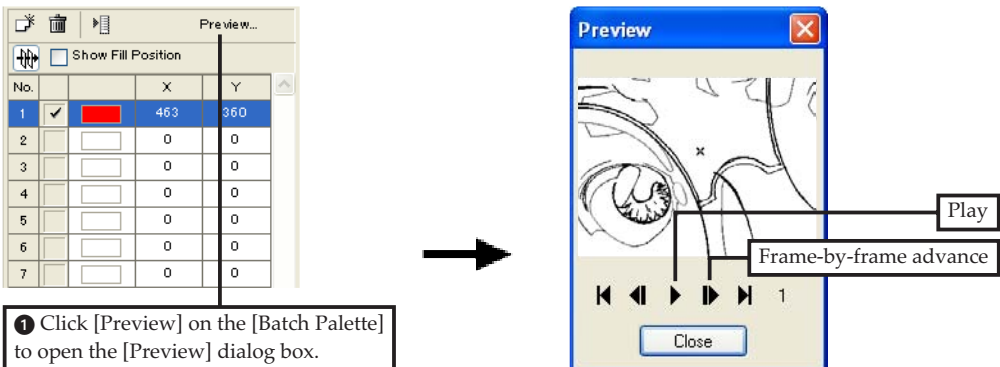
[Cel] window

Specify the second and subsequent colors using the same procedure in the second row onwards.

## Tips

- Clicking [Show Fill Position] on the [Batch Palette] shows an [X] in the [Fill Position].
- Colors can be added or deleted using the [Add Items] and [Delete Items] in the show menu.
- All specified colors can be cleared using [Clear] in the show menu.

### 3. Preview.



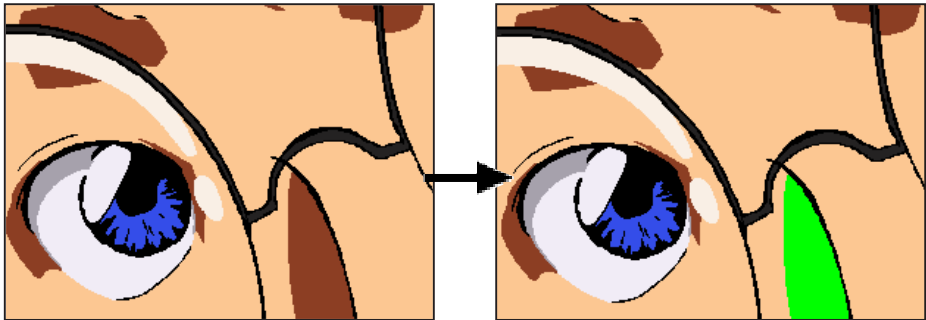
Original image

[Preview] panel

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Color Replace

This function changes the colors in a series of images at once which is convenient for changing colors because a color was used by mistake, or because of a change in the color styling. The procedure for executing a Color Replace by selecting [Color Replace] from the batch processing items under the [Batch Palette] is described below.



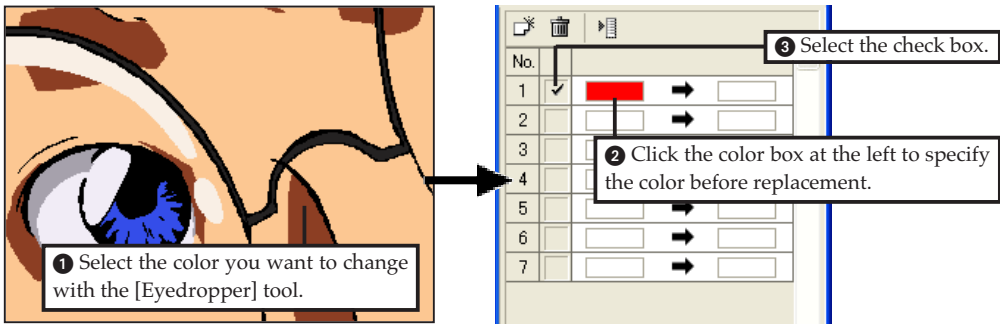
Original image

After processing

1. Open the Cel window.

Open the window with the image on which you want to execute the processing.

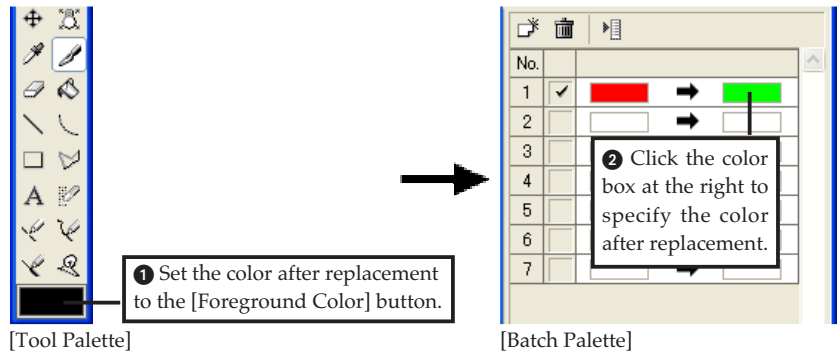
2. Specify the original color (first color).



[Cel] window

[Batch Palette]

3. Specify the target color (first color).



[Tool Palette]

[Batch Palette]

Tips

- The following options under the [Show Menu] allows you to save and load configured settings.
  1. [Save] - Allows you to save the settings as a [ColorReplace Settings File] (extension: src).
  2. [Load] - Allows you to load a [ColorReplace Settings File] (extension: src).
- Colors can be added or deleted using the [Add Items] and [Delete Items] in the show menu.
- All specified colors can be cleared using [Clear] in the show menu.
- For a [ColorReplace Settings File] to be loadable to RETAS!PRO Ver. 5, you must save it to Ver. 5 format (extension: crf) by selecting [Show Menu] → [Save...].



[ColorReplace Settings File]

Creating a ColorReplace Settings file from a cel

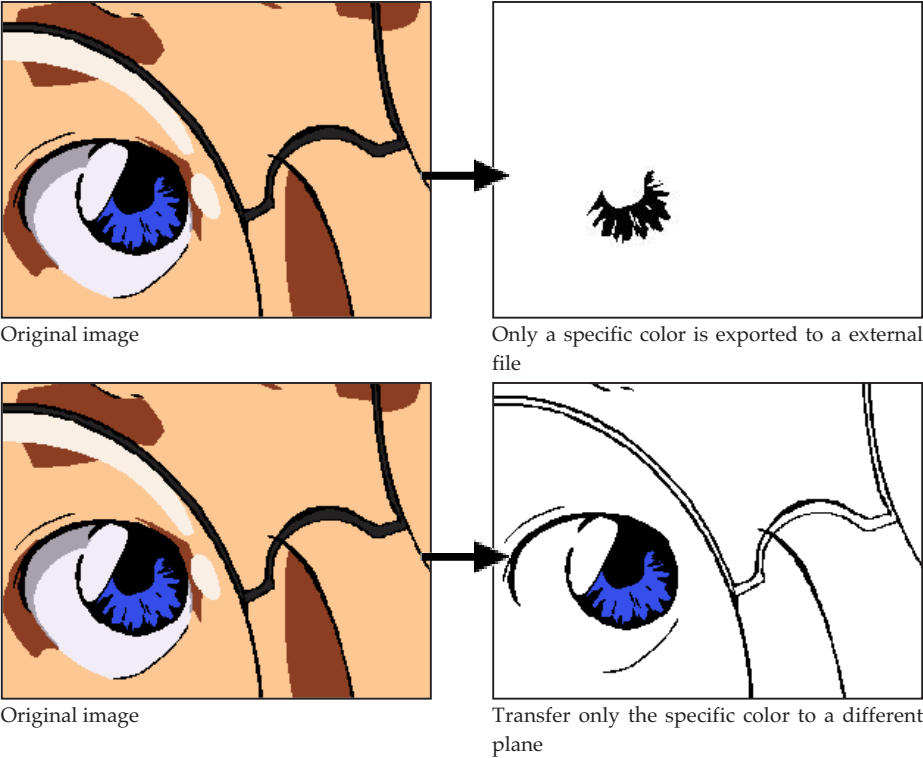
You can create a ColorReplace Settings file (src) from 2 cels by using the dialog box that appears when you select [Color] → [Create ColorReplace From Cel] from the [File] menu.



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Separation

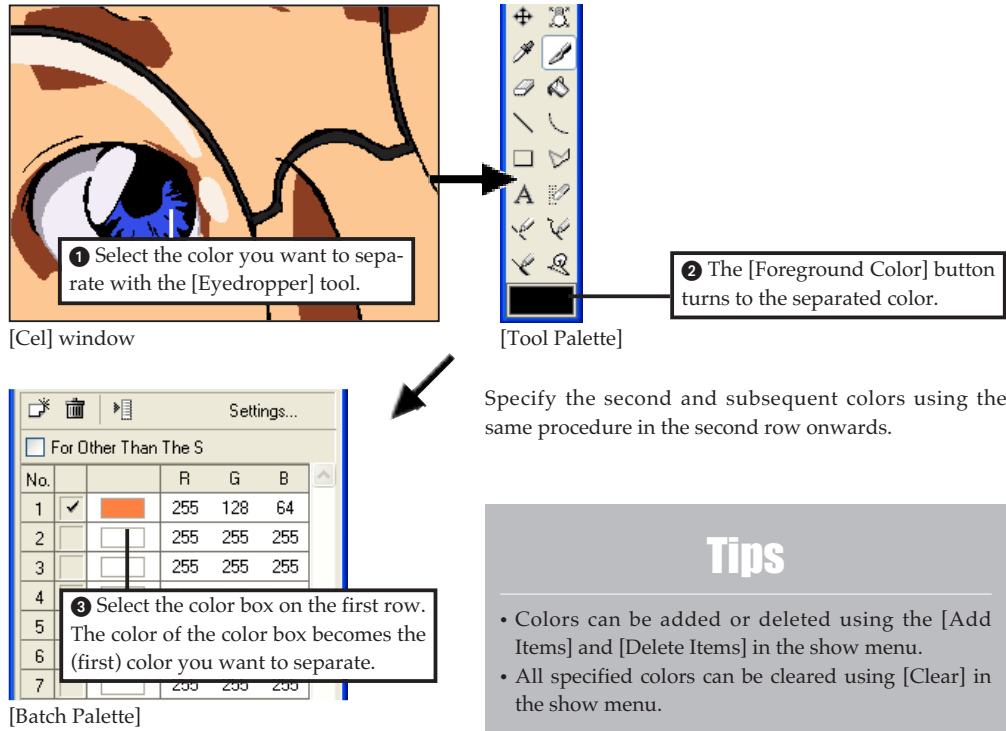
This is a function for extracting a specific color from an image and export it to an external file or transfer it to another layer, and is mainly used for masking. The procedure for executing a Separation by selecting [Separation] from the batch processing items under the [Batch Palette] is described below.



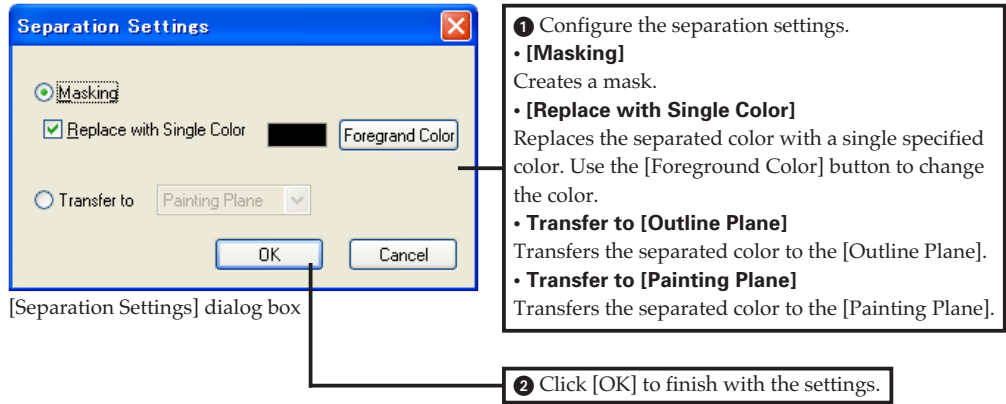
1. Open the Cel window.

Open the window with the image on which you want to execute the processing.

2. Specify the color to separate (first color).



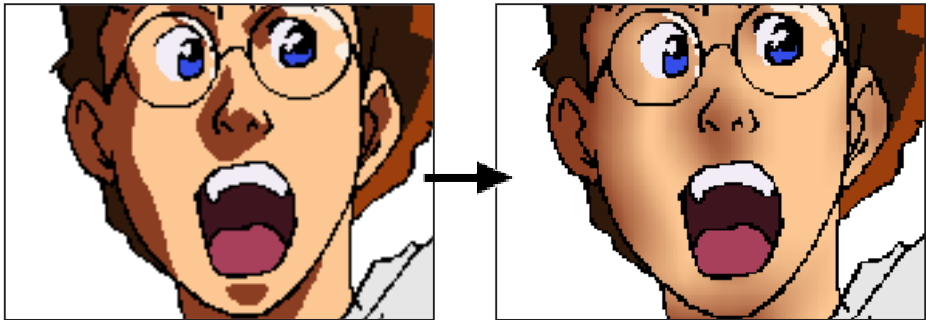
3. Configure the separation settings.



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Airbrush Effect

[Airbrush Effect] is a processing for smoothing the edge between two colors as if airbrush has been applied. The procedure for applying an Airbrush Effect by selecting [Airbrush Effect] from the batch processing items under the [Batch Palette] is described below.



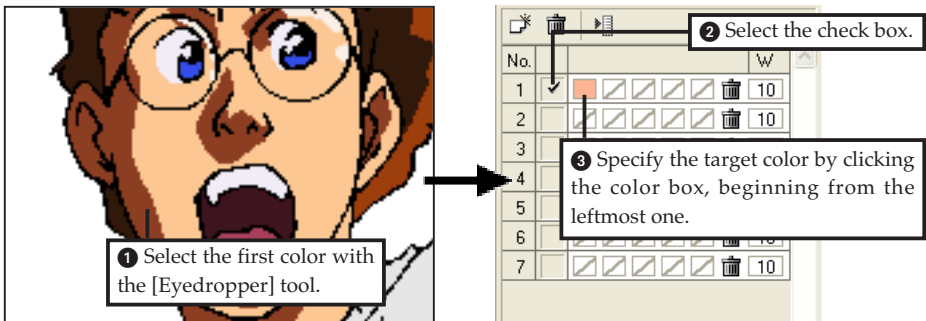
Original image

After Airbrush Effect

1. Open a [Cel] window.

Open the window with the image on which you want to execute the processing.

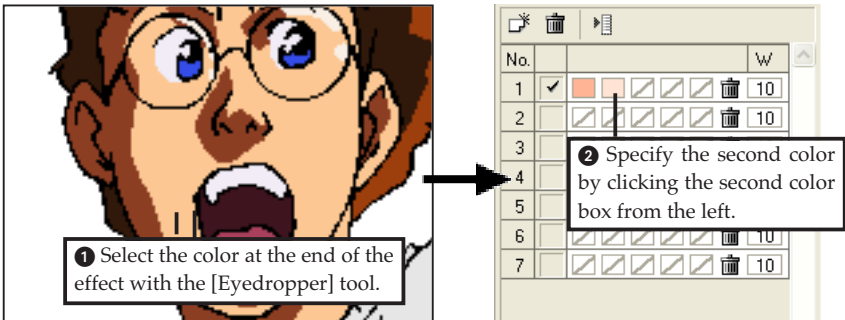
2. Specify the target color (first color).



[Cel] window

[Batch Palette]

3. Specify the color of the effect (second color).

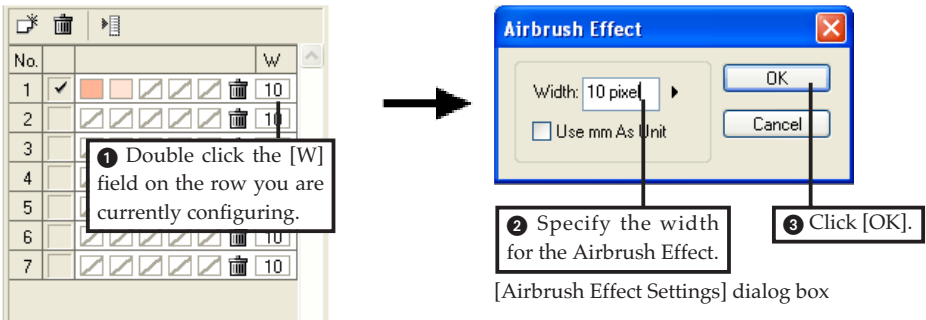


[Cel] window

[Batch Palette]

Specify the third and subsequent colors using the same procedure in the third color box onwards.

4. Configure the Airbrush Effect width.



[Batch Palette]

[Airbrush Effect Settings] dialog box

Tips

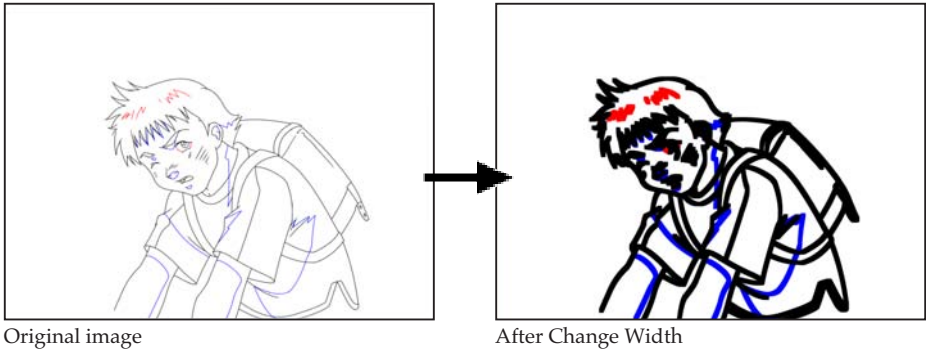
- The following options under the [Show Menu] allows you to save and load configured settings.
  1. [Save] - Allows you to save the settings as an [Airbrush Effect Settings File] (extension: **abf6**).
  2. [Load] - Allows you to load an [Airbrush Effect Settings File] (extension: **abf6**).
- Colors can be added or deleted using the [Add Items] and [Delete Items] in the show menu.
- All specified colors can be cleared using [Clear] in the show menu.
- For a [Airbrush Effect Settings File] to be loadable to RETAS!PRO Ver. 5, you must save it to Ver. 5 format (extension: **abf**) by selecting [Show Menu] → [Save...].



[Airbrush Effect Settings File]

Change Width

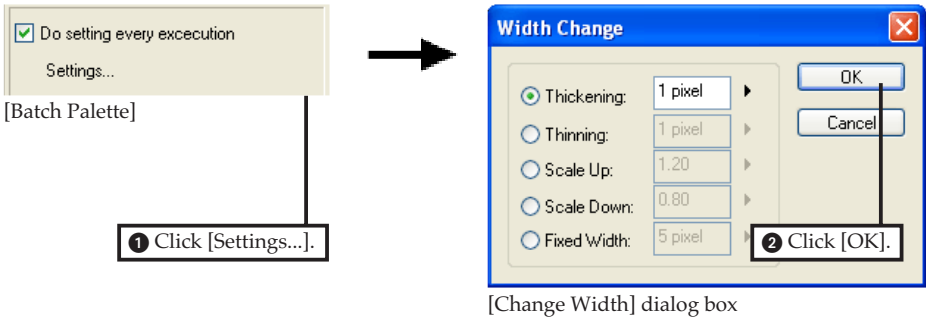
This function changes the line width in multiple images at once.  
The procedure for executing the Change Width is by selecting [Change Width] from the batch processing items under the [Batch Palette] as described below.



1. Open the Cel window.

Open the window with the image on which you want to execute the processing.

2. Specify the line width.



Tips

Selecting [Do setting every execution] on the [Batch Palette] opens the [Change Width] dialog box for each of the cels to be processed so that you can configure the settings.

- **[Thickening]**  
Thickens the line width by the specified value.
- **[Thinning]**  
Thins the line width by the specified value.
- **[Scale Up]**  
Enlarges the line by the specified percentage.
- **[Scale Down]**  
Reduces the line by the specified percentage.
- **[Fixed Width]**  
Fixes the line width to the specified value.

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RETAS!PRO

# *Chapter* **13**

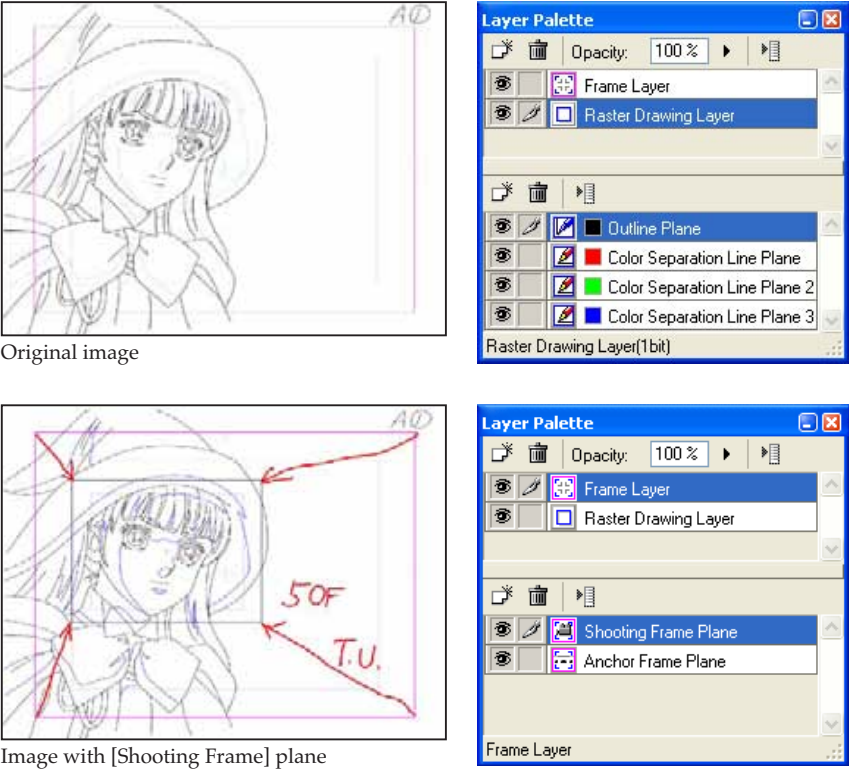
## **Direction and Text**



# Entering a shooting direction

## Creating a framing

The procedure for creating a framing for entering shooting directions is as follows.

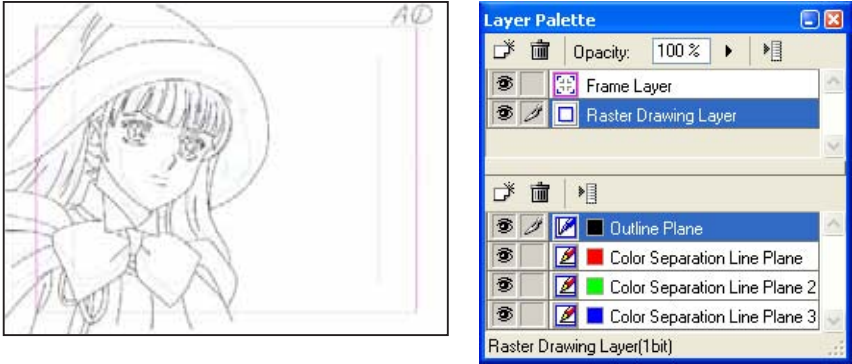


### Shooting frame plane

- [Frame Layer] is a layer where you can create a frame for entering a shooting direction (frame scale for T.U. (track up), for example).
- You can also enter other directions related to shooting direction on the [Direction Layer] so that they are conveyed to downstream processes for sure.

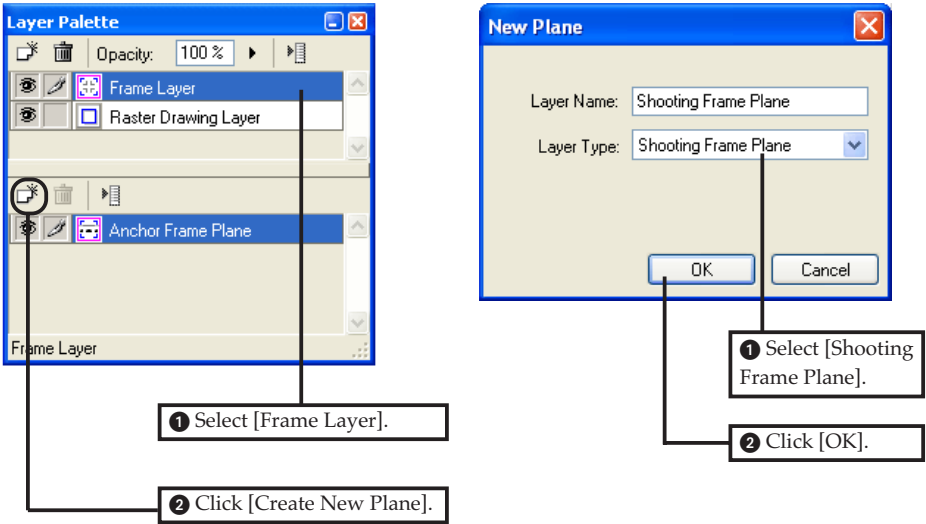
### 1. Open the Cel window.

When inbetweening is finished, double click an inbetween thumbnail from the [File Browser] and open the Cel window.



### 2. Create a new shooting frame plane.

Click the [Create New Plane] button on the [Layer Palette] and open the [New Plane] dialog box. There, create a [Shooting Frame Plane].



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3. Configure the shooting frame plane.

Configure the detailed settings for the [Shooting Frame Plane] using the [Shooting Frame] dialog box.

Shooting Frame

Frame: 100.0

Angle: 0.0

Position

X: 11.28 cm

Y: 8.46 cm

Easy Position Adjustment

Top-left

Top-right

Center

Bottom-left

Bottom-right

OK

Cancel

Specify the size and angle of the [Frame] to create.

Specify the position (coordinates) for the [Frame].

Click either of these buttons to determine the home position of the [Frame] easily.

Clicking [OK] confirms the settings and creates the [Shooting Frame Plane].

4. Completion

The [Shooting Frame Plane] is added to the [Layer Palette] and the [Shooting Frame] appears on the [Cel] window view.

Layer Palette

Opacity: 100 %

Frame Layer

Raster Drawing Layer

Shooting Frame Plane

Anchor Frame Plane

Frame Layer

Tips

The position and size of the [Shooting Frame] can also be adjusted by dragging on the screen with the [Shooting Frame] dialog box open.

Entering directions using drawing tools

The procedure for entering directions using arrows and/or text after framing is as follows.

1. Create a new direction layer.

Click the [Create New Layer] button on the [Layer Palette] and open the [New Layer] dialog box. There, create a [Direction Layer].

Layer Palette

Opacity: 100 %

Frame Layer

Raster Drawing Layer

Shooting Frame Plane

Anchor Frame Plane

Frame Layer

New Layer

Layer Name: Direction Layer

Layer Type: Direction Layer

OK

Cancel

2. Write the shooting directions.

The [Direction Layer] appears on the [Layer Palette]. Select a drawing tool from the [Tool Palette]. Write the directions using arrows and text on the [Cel] window.

Layer Palette

Opacity: 100 %

Direction Layer

Frame Layer

Raster Drawing Layer

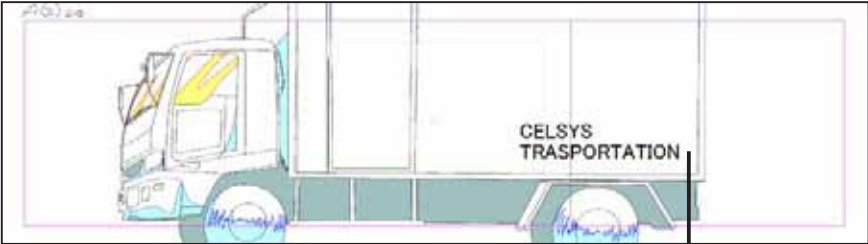
Raster Plane

Direction Layer(32bit)

# Text function

## Types of text function

The text function is a function that allows you to write directions on an image, or enter a text that will be part of an image.



Example of writing on the text layer



Example of call-out with RGB values indication using 256 levels.

### Text layer

- The entered text is processed as object and not as part of a drawing which allows you to edit it later on if necessary.

### Direction text layer

- The entered text is processed as object and not as part of a drawing which allows you to edit it later on if necessary.
- This is a layer that can be excluded from the layers to export.

### Drawing on a selected raster plane

- The entered text is processed as part of the raster drawing.

## Tips

- Texts can include Line Feed (LF). Remarks can be written using call-outs.
- A call-out to a colored part allows input of RGB values.

## Entering a text

The procedure for entering a text that can be edited later on the [Text Layer] is as follows.

### 1. Open the Cel window.

Double click the target inbetween thumbnail from the [File Browser].



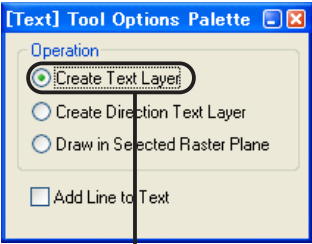
### 2. Configure the Text tool options palette.

Select [Text] tool from the [Tool] Palette. Then select [Create Text Layer] on the [Text] tool options palette.



Select [Text] tool from the [Tool] palette.

STYLOS HD [Tool] palette

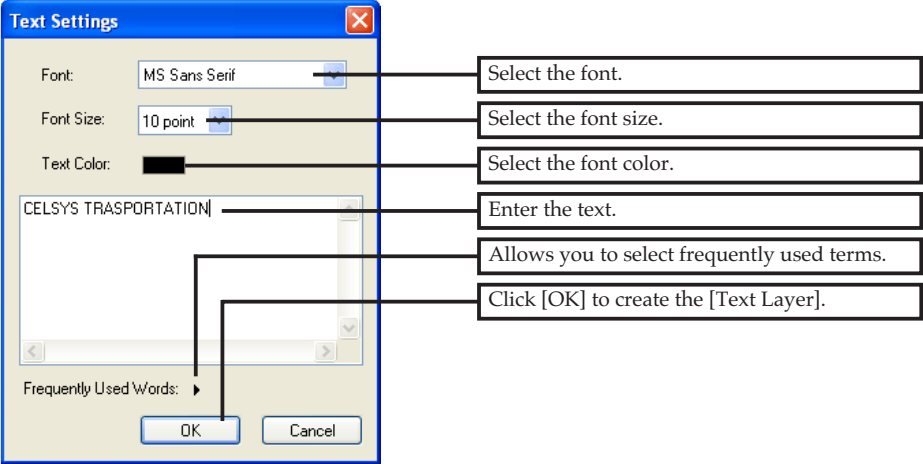


Select [Create Text Layer].

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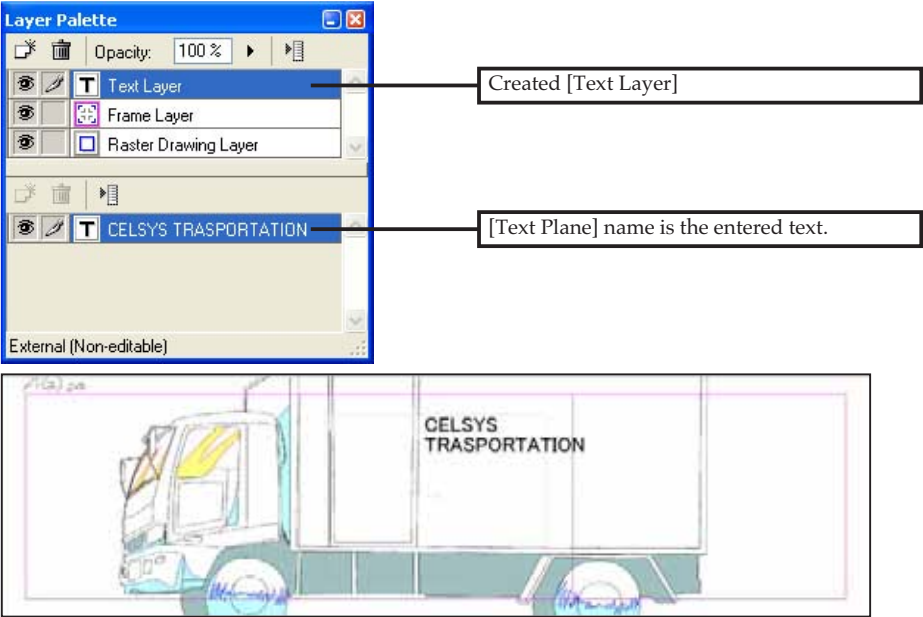
3. Enter the text.

Click anywhere inside the [Cel] window to open the [Text Settings] dialog box. There, specify [Font], [Font Size], [Text Color] accordingly and enter the text in [Text Box].



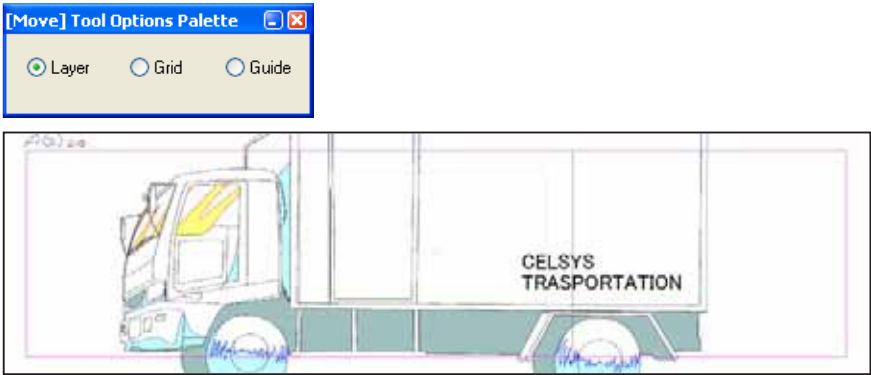
4. Completion

The [Text Layer] is created, and the [Text Plane] named using the text you entered is added to the [Layer Palette].



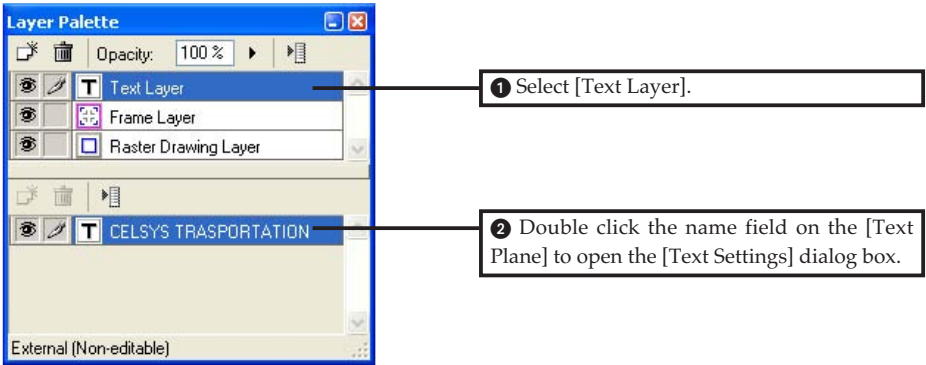
5. Moving a text layer

Select [Move] tool from the [Tool] Palette. Then select [Layer] on the [Move] tool options palette. Check that the [Text Layer] is selected on the [Layer Palette]. Then drag to move the text position in the [Cel] window.



6. Changing the text settings

Select [Text Layer] from the [Layer Palette], then double click the name field of the target text on the [Text Plane] to open the [Text Settings] dialog box that allows you to change the content of the text, or the font size etc.



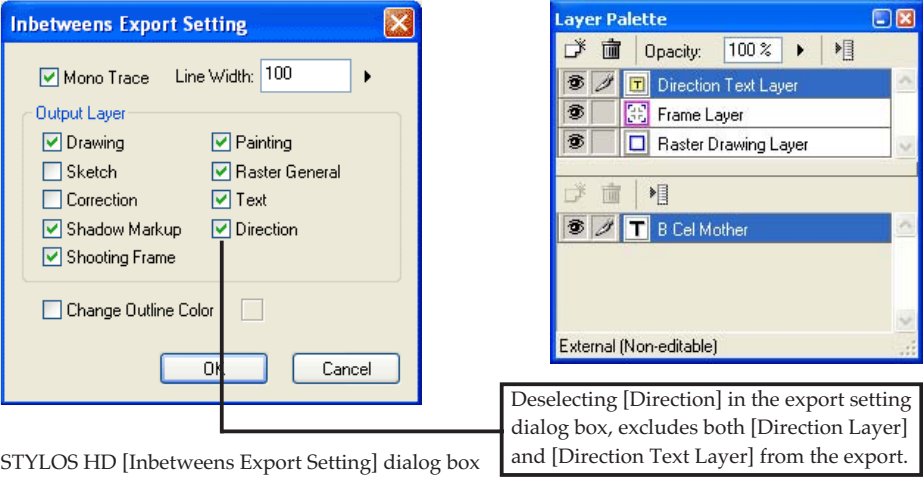
Tips

- The [Text] tool can be used to move a [Text Layer], also a one including call-out. Selecting on the call-out line moves the whole call-out. Selecting the call-out text part moves only the call-out text box with the call-out line end fixed.
- The [Text Settings] dialog box can also be opened by double clicking the text shown on the screen with the [Text] tool.

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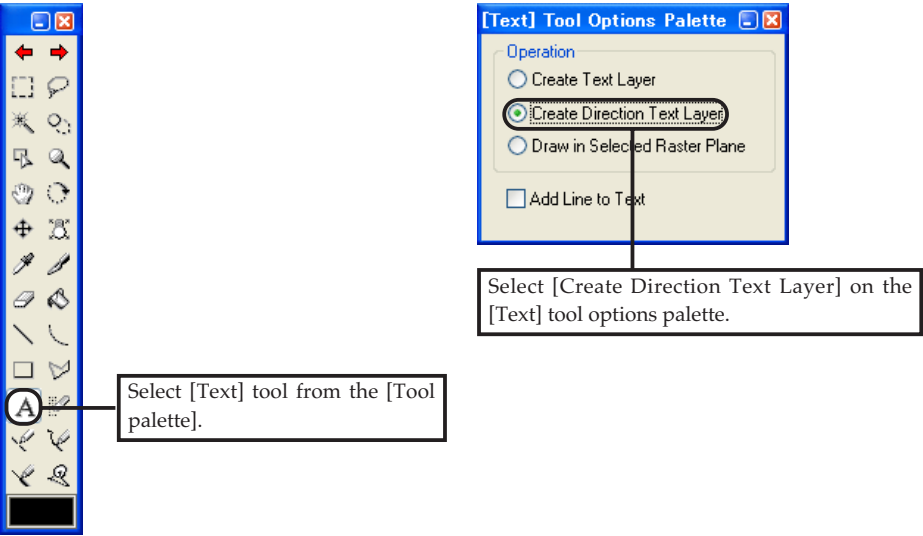
Entering a direction text

The procedure for creating a [Direction Text Layer] with [Direction Layer] attributes where you can enter a text that can be edited later on is as indicated below.  
Export of the [Direction Text Layer] can be turned off using a dialog box.



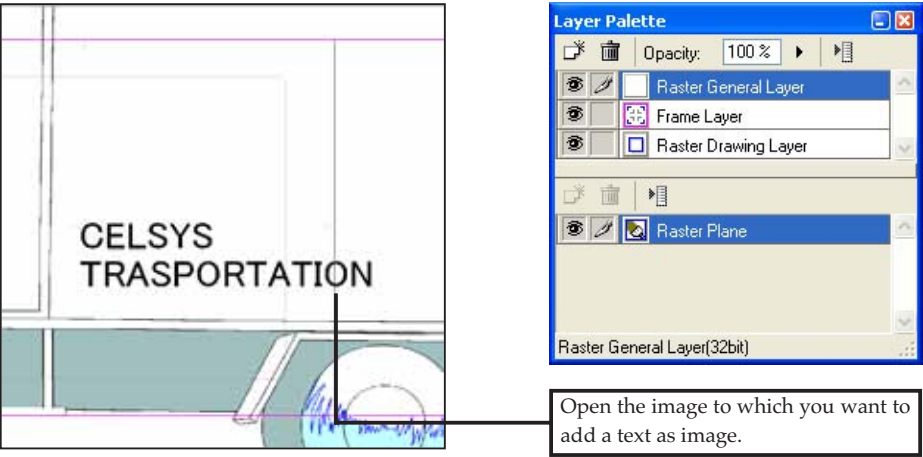
Configuring the text tool options palette

The procedure for creating a [Create Text Layer] is the same as that for the [Text Layer] though the tool options palette needs to be configured as shown below.



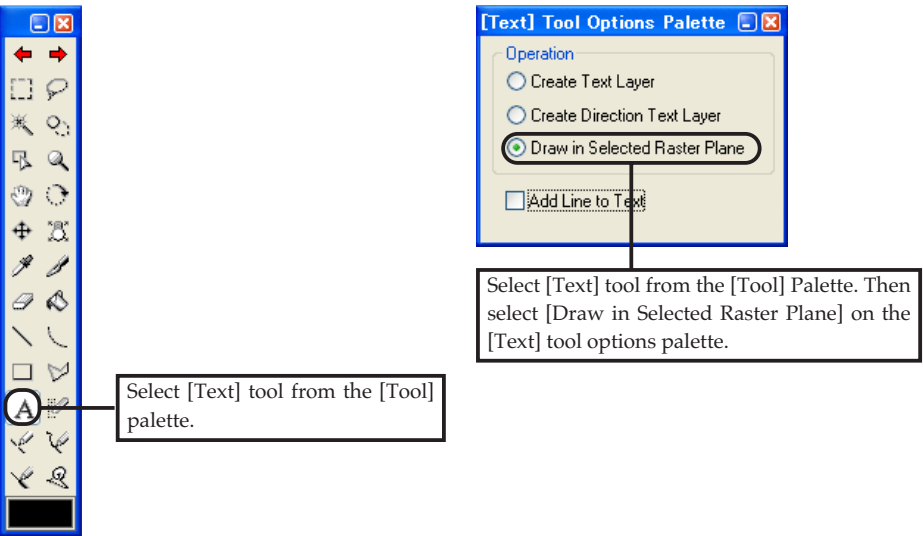
Entering a text as raster image

The procedure for entering a text to the raster plane as image is as follows. Note that this text cannot be edited later.



Configuring the text tool options palette

The procedure for creating a [Create Text Layer] is the same as that for the [Text Layer] though the tool options palette needs to be configured as shown below.



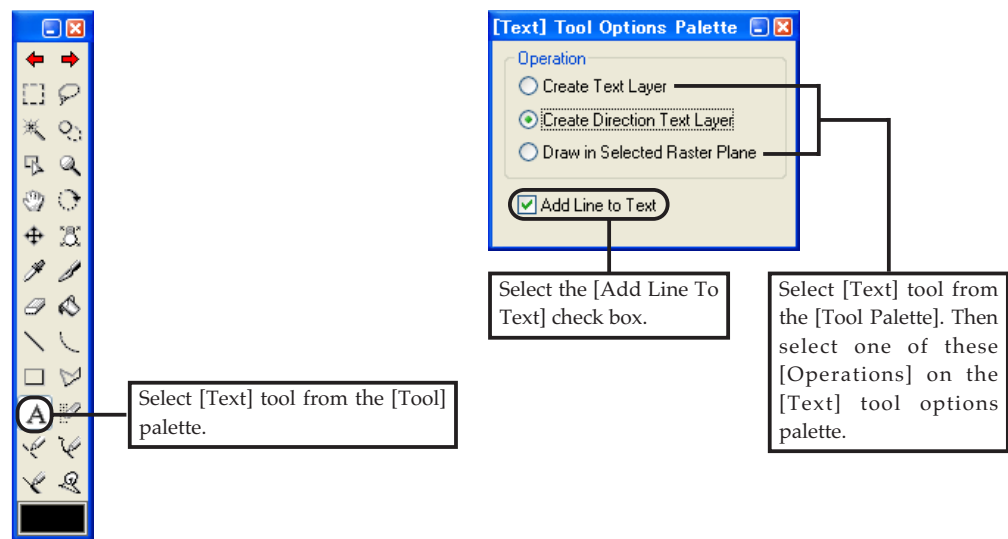
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Entering a call-out

A call-out allows you to add a line as well as enter RGB value along with a text.

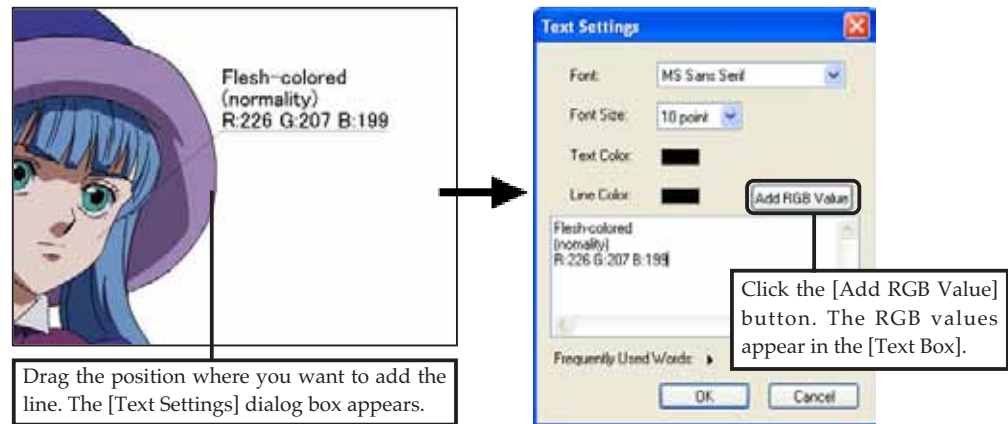
Configuring the text tool options palette

The procedure is the same as that for the basic [Text Layer] though the tool options palette needs to be configured as shown below.



Adding line and RGB value

The procedure for entering a text is the same as for the [Text Layer]. The line and the RGB value can be added through the operation described below.



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# Chapter **14**

## Redoing an operation



# Redo and revert

## Undo

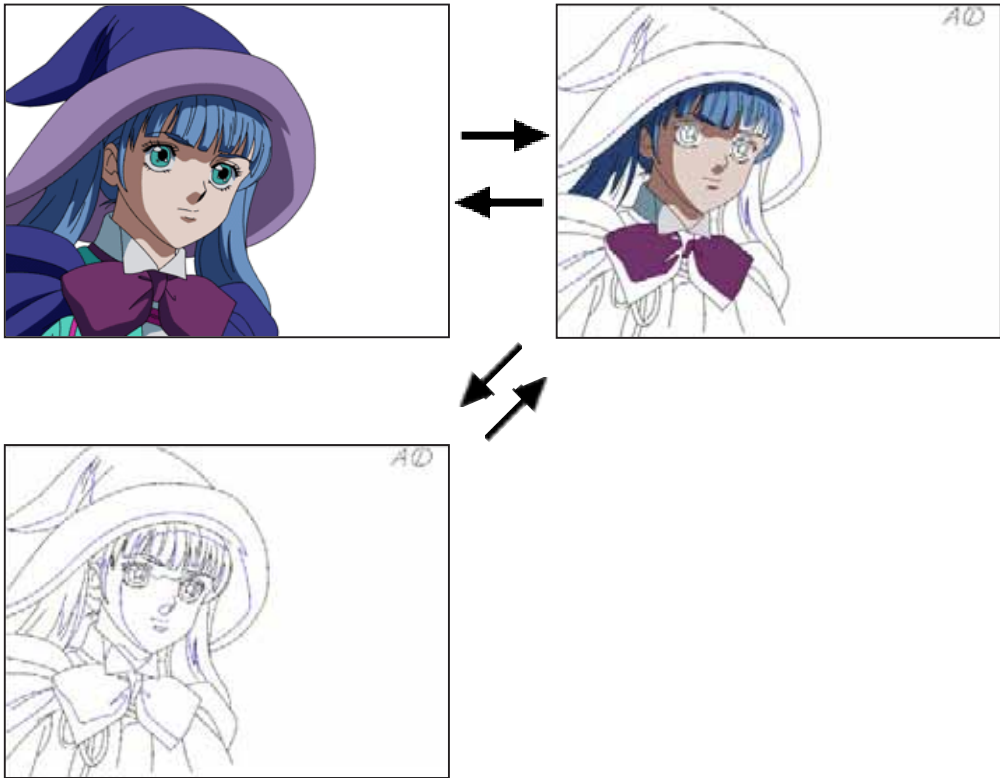
Undoes the previous operation. This command allows you to undo multiple operations. (Maximum 20)

## Redo

Redoes the previous operation. This command allows you to redo multiple operations. (Maximum 20)

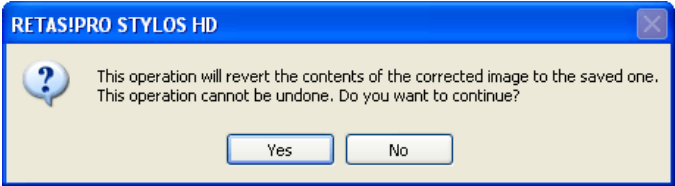
### 1. Select the command.

To undo or redo, select [Undo] or [Redo] from the [Edit] menu.



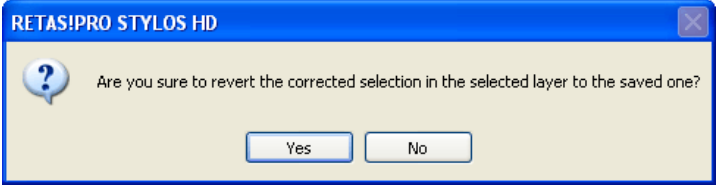
## Revert

Returns the content to the last saved one. Use this command to recover from a wrong operation or when you want to discard all the changes made.



## Revert Layer Partially

Returns a selected part of a layer to the last saved content. Use this command to recover from a wrong operation or when you want to discard all the changes made.



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# Chapter **15**

## Completion and Output

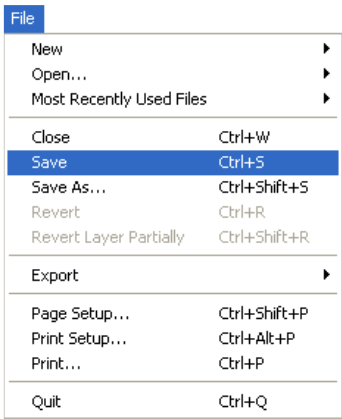
# Saving a file

## Save

The procedure for saving the content of a completed job or operation, or the contents at given points of a job is as follows.

### 1. Select the menu.

Select [Save] from the [File] menu. The data in the window overwrites the previously saved content.



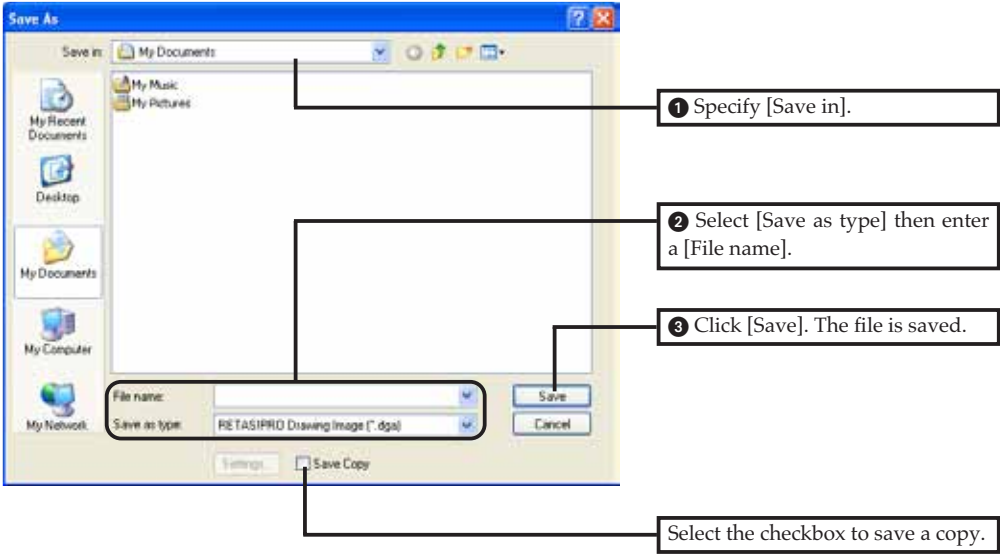
(STYLOS HD screen image)

## Save As

The procedure for saving a content under a different name or format is as follows.

### 1. Select the menu.

Select [Save As...] from the [File] menu. The [Save As] dialog box appears.



## Tips

Saving a scene image out-of-the corresponding scene folder is not recommended except when there are special reasons as it may be a likely cause of file management related troubles.

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# Exporting to general raster image format

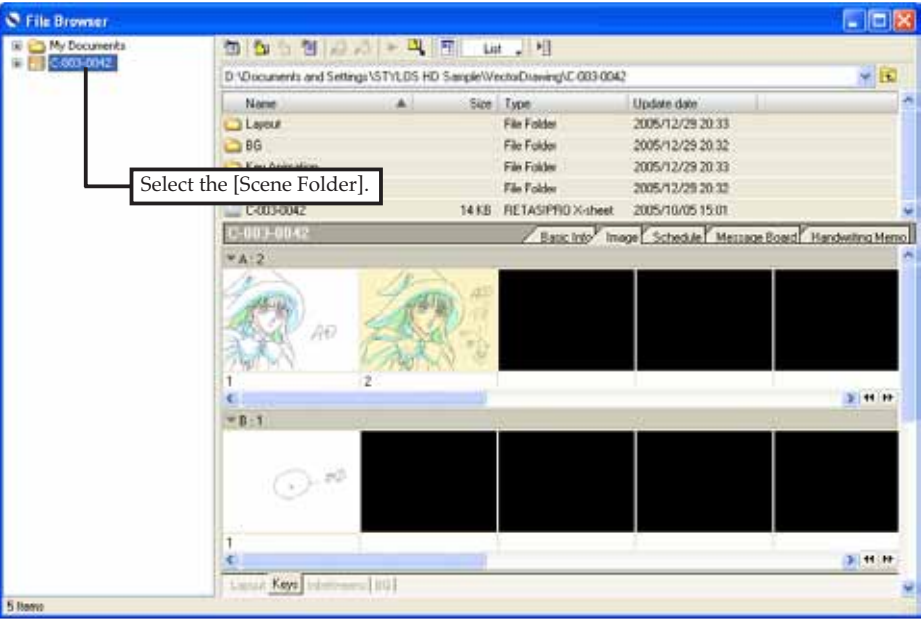
## Exporting on a scene basis

The procedure for exporting RETAS!PRO images to general raster image format images on a scene basis is as follows. This is convenient when you want to use the data with a different software.

**Supported export formats:** BMP, PICT, PNG, RAW, SGI, SOFTIMAGE, TARGA, TIFF

### 1. Select the scene folder.

Open the [File Browser] from the [Window] menu. Then, select the scene folder you want to export from the [File Browser].



### 2. Select the command.

Select [Export...] → [Raster...] from the [File] menu. The [Export Scene Folder] dialog box appears.

### 3. Configure the Export Scene Folder dialog box.

Configure each of the items under [File], [Object Selections], and [Options].

Select the format to which you want to convert in [File Type].

Select the check boxes of the images you want to export. If [Inbetween] and [BG] are selected, clicking [Settings...] opens the corresponding [ccc Export Setting] dialog box.

Select the check box to enable the option.

Click to open the [Image Settings] dialog box.

Configure the size of the images to export, DPI, etc.

Specify the layers to include in the export and other items.

[Mono Trace], [Line Width], [Change Outline Color] are present in STYLOS HD only, and replaced with [Anti-aliasing] in TraceMan HD and PaintMan HD.

### 4. Completion

Click [OK] in the [Export Scene Folder] dialog box. The scene folder is exported.

## Tips

- An alternative method for opening the [Export Scene Folder] dialog box is as follows.
- Click [Show Menu] on the [File Browser], then select [Export] → [Raster...] from the menu that appears.

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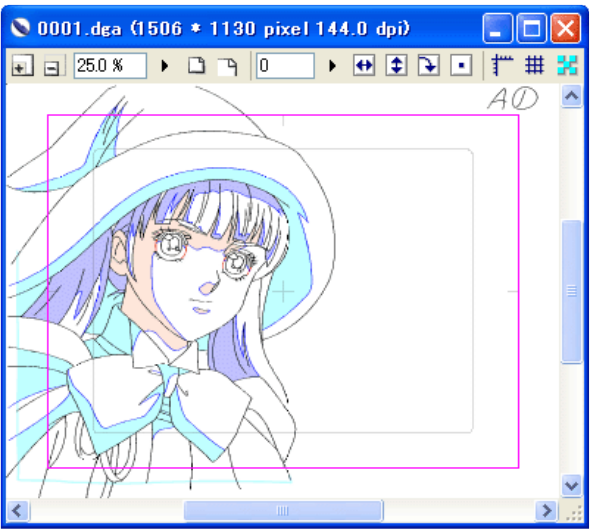
Exporting on a cel stack basis

The procedure for exporting RETAS!PRO images to general raster image format images on a cel stack basis is as follows. This is convenient when you want to use the data with a different software.

**Supported export formats:** BMP, PICT, PNG, RAW, SGI, SOFTIMAGE, TARGA, TIFF

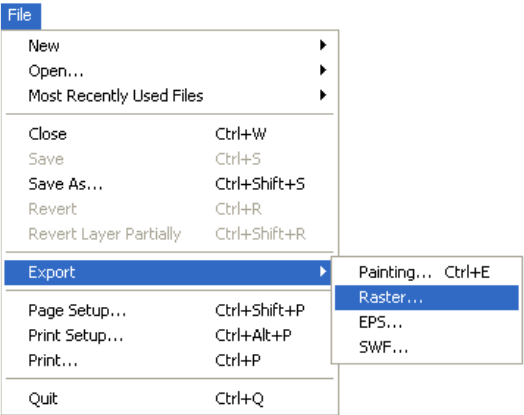
1. Open the image in the [Cel] window.

Open the image you want to export in the [Cel] window using the [File Browser], for example.



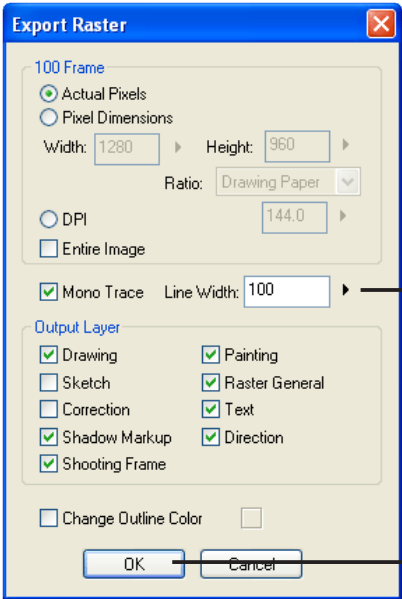
2. Select the command.

Select [Export] → [Raster...] from the [File] menu. The [Export Raster] dialog box appears.



3. Configure the Export Raster dialog box.

Specify each of the items under [100Frame] and [Output Layer] as well as the export size.



[Mono Trace], [Line Width], [Change Outline Color] are present in STYLOS HD only, and replaced with [Anti-aliasing] in TraceMan HD and PaintMan HD.

Click [OK] to finish with the settings.

4. Specify the export location.

In the [Save As] dialog box that appears, specify [Save in] and [Save as type] then enter [File name].



Click [Save] to export the image data according to the settings.

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# Exporting to general vector image format

## Exporting on a scene basis

The procedure for exporting RETAS!PRO images to general vector image format images on a scene basis is as follows. This is convenient when you want to use the data with a different software.

**Supported export formats:** EPS, SWF

### 1. Select the scene folder.

Select the scene folder containing the scene to export from the [File Browser], for example.

### 2. Select the command.

Select [Export] → [EPS...] (for exporting to EPS) or [SWF...] (for exporting to SWF) from the [File] menu.



[Example of export to EPS]

## Tips

Export to general vector format is possible **only for images drawn in vector format.**

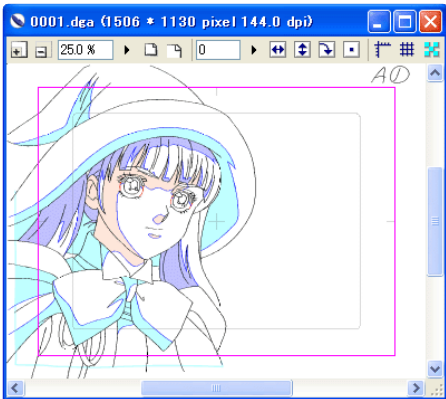
## Exporting on a cel stack basis

The procedure for exporting RETAS!PRO images to general vector image format images on a cel stack basis is as follows. This is convenient when you want to use the data with a different software.

**Supported export formats:** EPS, SWF

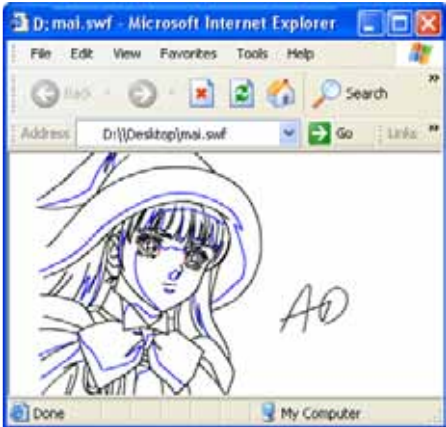
### 1. Open the image in the Cel window.

Open the image you want to export in the [Cel] window using the [File Browser], for example.



### 2. Select the command.

Select [Export] → [EPS...] (for exporting to EPS) or [SWF...] (for exporting to SWF) from the [File] menu.



[Example of export to SWF]

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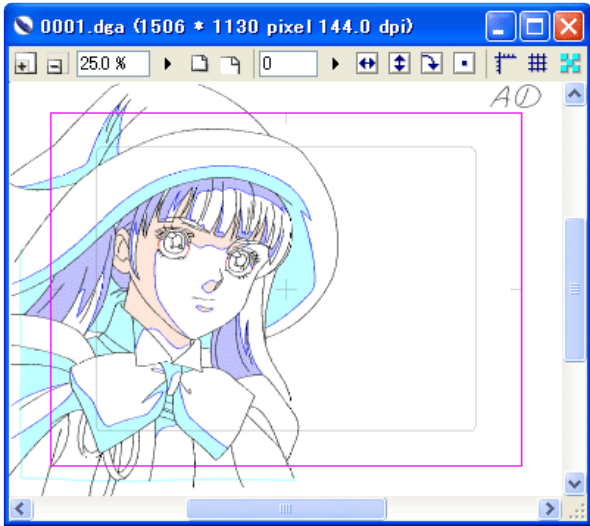
# Printing

## Print

The procedure for printing an image in the [Cel] window or an X-sheet is as follows.

### 1. Open the window.

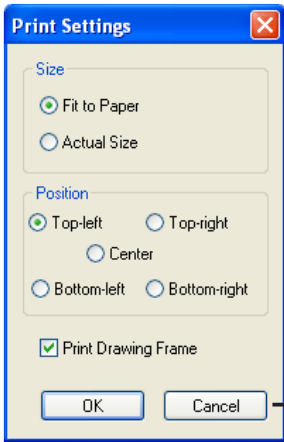
Open either the [Cel] window or the [X-sheet] window.



Example of [Cel] window

### 2. Configure the Print dialog box.

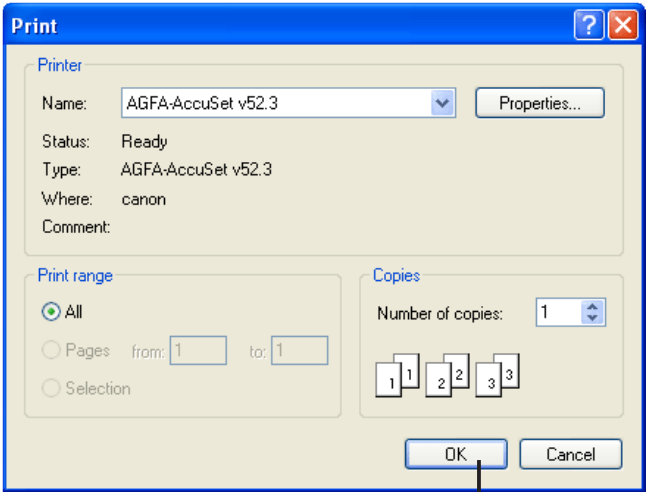
Select [Print Setup...] from the [File] menu. The [Print Settings] dialog box appears.



Specify [Size] and [Position], and click [OK].

### 3. Print.

Select [Print ...] from the [File] menu. The [Print] dialog box appears.



Specify the necessary items and click [OK]. The printing starts.

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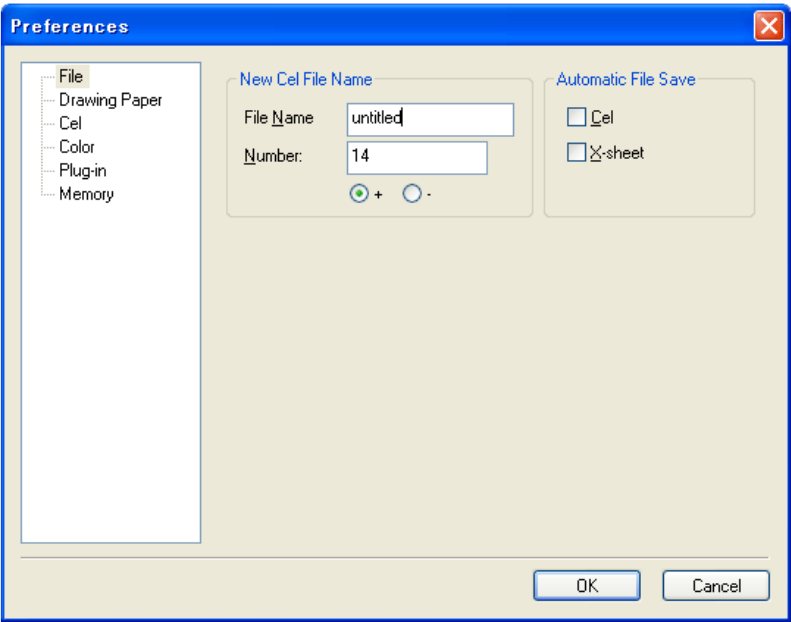
# *Chapter* **16**

## **Preferences**



# Configuring the Preferences

This chapter describes the preferences you can configure with the dialog box that appears when you select [Settings] → [Preferences...] from the [Edit] menu (Windows), or [Preferences...] from the application menu (Macintosh).



## File

Allows you to configure [Cel] naming and automatic file saving related settings.



### [New Cel File Name]

Allows you to specify the [File Name] that will be entered automatically when you create a new [Cel] window.

- **[File Name]**  
Allows you to enter an arbitrary name.
- **[Number]**  
Allows you to specify the initial sequential number that will be appended to a new [File Name]. Selecting [+] will increment the number for each new cel you create while selecting [-] will decrement the number for each new cel you create.

### [Automatic File Save]

Allows you to have the file(s) you were working on saved automatically (that is, without showing the save warning dialog box) when you close the file(s) or move onto the preceding or following cel without saving.

- **[Cel]**
- **[X-sheet]**
- **[Color Chart] (Only PaintMan HD)**

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Drawing Paper

Allows you to specify the size of the drawing paper that will be shown in the [Cel] window, and its margin.



- **[Drawing Paper]**  
Allows you to specify a drawing paper from the pull-down menu.
- **[Edit...]**  
Allows you to edit the drawing paper settings.
- **[Unit]**  
Allows you to select the unit for the drawing paper size.
- **[Resolution]**  
Allows you to specify the resolution for the drawing paper.
- **[Load...]**  
Loads a saved **[Drawing Paper Settings file] (extension: apf)**.
- **[Save...]**  
Saves the drawing paper settings as a **[Drawing Paper Settings file] (extension: apf)** to an arbitrary location.



[Drawing Paper Settings file]

Anchor Frame

Allows you to specify the [Width] and [Height] of the anchor frame.

Margin

Allows you to specify the outward distance at which the [Margin] will be positioned from the anchor frame.

Safety Frame

Allows you to specify the inward distance at which the [Safety Frame] will be positioned from the anchor frame.

Tips

When configuring a new drawing paper, the first thing to do is decide the [Anchor Frame] size, then decide how outside the [Anchor Frame] the [Margin] must be, and lastly decide how inside the [Anchor Frame] the [Safety Frame] must be.

Cel

Allows you to configure [Cel] window related settings.



Undo

Allows you to configure the [Undo] ([Ctrl/Cmd] + [Z]) under the [Edit] menu.

- **[Number of Undo's]**  
Allows you to specify the number of [Undo] levels.
- **[Register To Undo Buffer After x seconds From Drawing]**  
Allows you to specify the time (in seconds) to save the [Undo] data temporarily.

Resolution

- **[Raster Image Reading Resolution]**  
Allows you to specify the resolution with which raster images will be loaded.

Options

Allows you to toggle various settings using the corresponding check boxes.

- **[Include Red, Blue, And Green in Color Check] (Only PaintMan HD)**  
Includes forgotten Red, Blue, and Green (color separation lines) check in the paint check. Forgotten leak in Red, Blue, and Green are indicated using the forgotten color.
- **[Move Cel Cyclically]**  
Loops the cels, so that executing a [Next Cel] command when the cel opened in the [File Previewer] is the last returns to the first cel.
- **[Cursor As Cross]**  
Shows the mouse pointer as a cross.
- **[Use Context Menu]**  
Enables the [Cel] window context menu which will appear at mouse right click or Ctrl + click.
- **[Hide Cursor While Drawing]**  
Hides the mouse pointer when a drawing is being drawn.
- **[Actual Pixels When Creating Cel Window]**  
Opens the [Cel] window with the view in actual pixels.

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- **[Show Cursor In Actual Size]**  
Shows the mouse pointer with the size specified on the [Tool Options Palette].
- **[Show Peg Holes in Anchor Frame] (Only vector drawings)**  
Shows the peg holes along with the [Anchor Frame].
- **[Round Up Pixel Smaller Than 1]**  
Rounds up pixels smaller than 1.
- **[Use mm As Tool Unit]**  
Uses mm as the unit for tools. (pixel is used when deselected)
- **[Anti-Alias Lines Being Drawn] (Only STYLOS HD)**  
Anti-aliasing is applied as a line is being drawn.
- **[Save As Ver. 5 RETAS Compatible]**  
Saves files in RETAS!PRO Ver. 5 compatible format.
- **[Scale Using Mouse Wheel]**  
Enables enlarging/reducing using the mouse wheel.

Color

Allows you to change various color settings. Color settings can be changed using the palette and/or [Color Settings] dialog box that appears when the [Color] button is clicked.



General ([Color] in TraceMan HD and PaintMan HD)

Allows you to change the color of the auxiliary lines, for example.

- **[Transparent]**
- **[Anchor Frame]**
- **[Shooting Frame]**
- **[Drawing Frame]**
- **[Guide]**
- **[Grid Line]**
- **[Grid Subdivision]**
- **[Grid Opacity]**  
Allows you to specify the [Grid Line] and [Grid Subdivision]opacity.

[Drawing Layer] (Only STYLOS HD)

Allows you to change the color settings for a drawing paper to create.

- **[Outline]**  
Allows you to change the [Outline Plane] foreground color.

[Color Separation Line] (Only STYLOS HD)

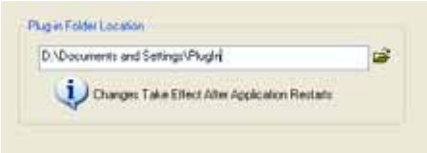
- **[Colors]**  
Allows you to specify the initial number of [Color Separation Line Planes].  
You may also specify the colors for the planes (from [1st Plane] to [6th Plane]).

[Correction Layer] (Only STYLOS HD)

Allows you to specify the color for the [1st Plane] to [3rd Plane] of the [Correction Layer]. For the 4th plane onwards, the colors for the 1st to 3rd planes are reused sequentially.

- **[Default Settings]**  
Returns all colors to the default values.

Plug-in



[Plug-in Folder Location]

Allows you to specify the location where the plug-in folder is stored. The change becomes valid from the next time you start the application.

Tips

All RETAS!PRO applications reference the [Plug-in Folder Location]. Do not change this setting unless the plug-in folder has been moved.

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Memory

Allows you to configure memory related settings. The change becomes valid from the next time you start the application.



Virtual Memory Folder Location

Allows you to select the location on the HD drive where you want to create the virtual memory when the computer main memory becomes insufficient.

- **[Temporary Folder in System]**  
Creates the virtual memory in the temporary folder created by the OS.
- **[Folder in]**  
Allows you to specify a folder (other than the system temporary folder) in which you want to locate the virtual memory.
- **[Available Space]**  
Shows the remaining space on the HD drive you specified as the virtual memory folder location.

Allocation to Application

Allows you to specify the quantity of memory you want to allocate for the applications.

- **[Auto Allocation]**  
Allocates the memory automatically. This is the recommended setting.
- **[Set Allocation Size]**  
Allows you to specify the quantity to allocate.
- **[Physical Memory Size]**  
Shows the available physical memory capacity.
- **[Allocatable Size]**  
Shows the memory capacity used in case [Set Allocation Size] is selected.

Tips

- Be sure to check the [Available Space] on the HD drive you want to specify as virtual memory folder location. If the specified HD drive does not have enough space, the program may become unstable.
- When selecting [Set Allocation Size], be careful with the quantity you allocate. Do not allocate till the remaining capacity ([Physical Memory Size] - [Allocatable Size]) becomes too small. Allocating too much memory may destabilize the OS.

Scanner (Only TraceMan HD)

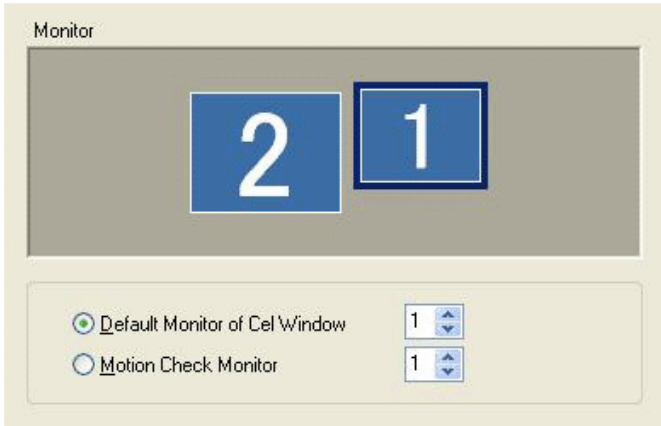
Allows you to configure scanner related settings.



- **[Scanner]**  
Allows you to select either [TWAIN Control] or [TWAIN] as the method for controlling the connected scanner.
- **[Unit]**  
Allows you to select either [Frame] or [Field] as the basic unit.
- **[Use ADF]**  
Select this check box if you want to use ADF for scanning with a scanner with ADF support.
- **[Auto Adjustment]**  
Adjusts automatically misalignments in position as well as skews at auto scan with ADF.
- **[Set Pegbar Position]**  
Allows you to select either [Left Side] or [Top] as the peg hole (pegbar) position.

Monitor (Only in multi-monitor environment)

Allows you to configure multi-monitor related settings.



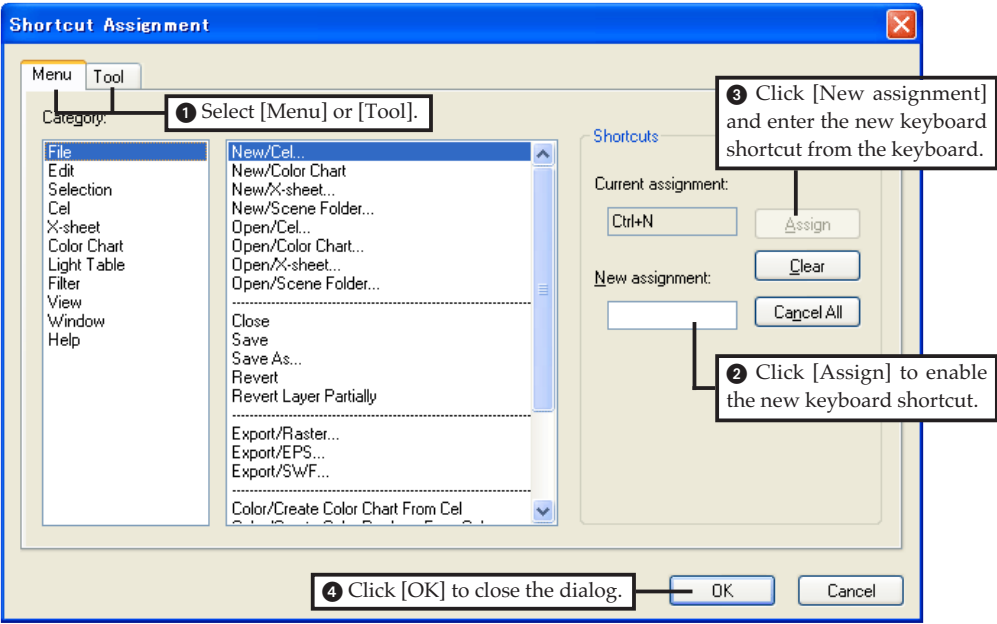
- **[Default Monitor of Cel Window]**  
Allows you to select the monitor on which you want to view the Cel window by entering either of the numbers in the preview.
- **[Motion Check Monitor]**  
Allows you to select the monitor on which you want to view the Motion Check by entering either of the numbers in the preview.

# Editing the shortcuts

The procedure for editing the keyboard shortcut of a [Menu] item or [Tool] on the [Tool] Palette is as follows.

## Assigning a keyboard shortcut

Select [Settings] → [Shortcut...] from the [Edit] menu. The Shortcut Assignment dialog box appears.



## Resetting a shortcut

To reset all changes and return to the default keyboard shortcut assignments, click [Cancel All].

### Tips

If a keyboard shortcut already in use is assigned to another menu item or tool, the new assignment overwrites the previous one.

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# Chapter **17**

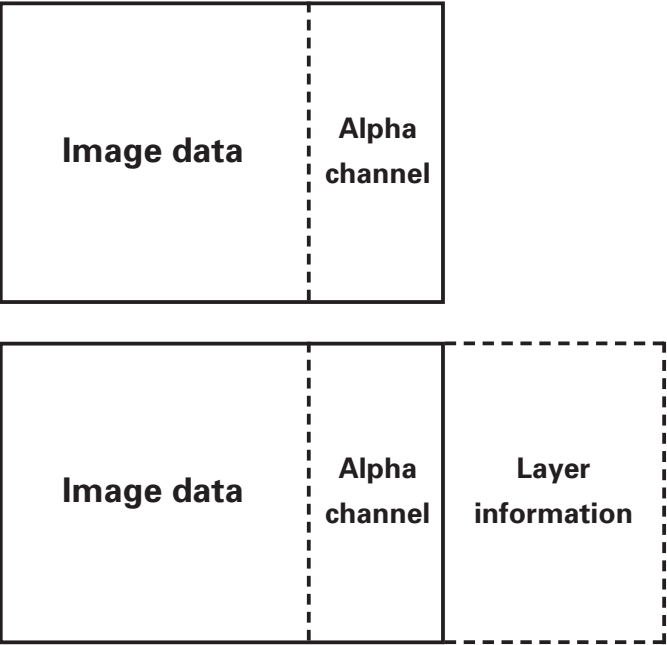
## Appendix

# Compatibility

## Exchanging data with other software programs

### Save format

RETAS!PRO HD retains information of several layers separately for the purpose of inbetween (line drawing) painting. When TraceMan HD executes a mono trace, it assigns the black lines to the outline plane and the color separation lines (red, blue, and green) to the painting plane, automatically. And, normally unused information such as the outline plane information, is recorded at the end of the image file.



[Figure: Layer information recorded at the end of the image file]

If you load and save an image file generated with TraceMan HD with an application program other than PaintMan HD, the information added by RETAS!PRO such as the outline plane information becomes lost.

## Compatibility with other software programs

Some application programs may not be able to open an image processed with RETAS!PRO as they interpret the layer information recorded by RETAS!PRO at the end of an image file as "invalid". (Examples: Photoshop 4.0/5.0 for Windows)

## Color styling

### Color styling using computer

Colors on computers are expressed using either RGB or HSV. PaintMan HD can handle both. However, only RGB will be described here as it is more common. In computers, "colors" are expressed as a mix of the three primary colors in light: Red (R), Green (G), and Blue (B). Each of the R, G, and B colors can be expressed in 256 levels (0 to 255) when using full color. In other words, a gray with brightness of 50% can be expressed as (RBG: 128,128,128). In Macintosh, the Color Picker expresses the colors in 65536 levels (16 bits) instead of 256 (8 bits). However, these levels can be expressed in 256 by dividing by 256.

|                  |                         |
|------------------|-------------------------|
| Example:         |                         |
| Skin             | R : 252 G : 199 B : 146 |
| Skin (shadow)    | R : 140 G : 162 B : 35  |
| Skin (highlight) | R : 255 G : 232 B : 217 |
| Hair             | R : 252 G : 199 B : 146 |
| Hair (shadow)    | R : 157 G : 162 B : 13  |

### Differences in coloring due to differences in the display device

Normally, color styling is done using the computer screen. However, most animations are reproduced through a video monitor or film. Therefore, in color styling, it is important to check the colors using the final display device as color generation mechanisms are different among the different devices.

## Exchanging data with other OS's

If you want to exchange data with other OS's, follow the recommendations below to name the files and avoid possible problems.

**Do not use the following characters in a filename.**  
/ : ? \* " < > |

**Do not enter a filename with 32 or more single-byte characters.**

**Do not use double-byte characters.**  
Example of double-byte characters: Chinese, Japanese and Korean character, double-byte number, double-byte symbol

**Do not use model-specific characters.**  
Example of model-specific characters: ① ②

In summary, put short and simple names using only "single byte characters" and "single byte numbers".

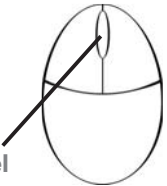
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# Operation using mouse and pen tablet

## Name of mouse parts

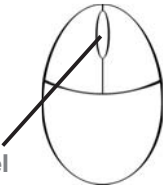
Left button



Right button

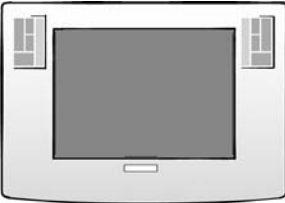
Mice used with MacOS X may have only one button. If so, use [Ctrl] + button to perform the right button operation.

Scroll wheel



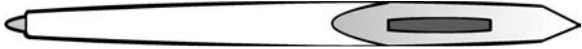
## Name of pen tablet parts

Graphics Tablet



Stylus

Pen-like input device.



### Side switch



Button at the side of the stylus. The button closer to the tip is the [Side Switch], and the farther from the tip is the [Second Side Switch]. Depending on the stylus, it may have no side switches at all. The operation you can perform using the side switches can be configured using the pen tablet settings. Please note that the description in this user guide is basically limited to the default settings.

### Tip switch



A switch at the tip of the pen. The switch is turned on when the tip touches the graphics tablet.

### Tail switch



A switch at the opposite side of the tip switch. The switch is turned on when the tail touches the graphics tablet. Depending on the model, the stylus may have no tail switch.

## Left click

With the mouse

Press the left button once.



## Double click

With the mouse

Press the left button twice.



## Right click

With the mouse

Press the right mouse button once.



### With the pen tablet



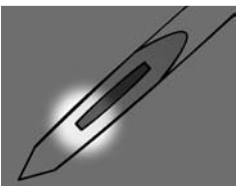
Touch the tablet "softly" with the tip of the stylus once. In this user guide, "click" refers to "left click" when stated simply.

### With the pen tablet



Touch the same point with the tip of the stylus twice. Or, press the second side switch on the stylus once.

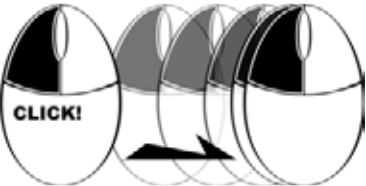
### With the pen tablet



Press the stylus side switch once.

## Drag

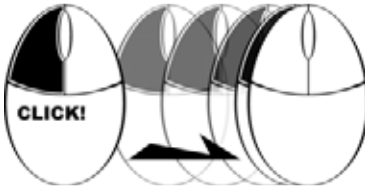
### With the mouse



Move the mouse with the left button held down.

## Drag and drop

### With the mouse



Move the mouse with the left button held down then release the left button at the target point.

### With the pen tablet



Move the stylus with the tip touching the graphics tablet.

### With the pen tablet



Move the stylus with the tip touching the graphics tablet and move away the tip from the graphics tablet at the target point.

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# Glossary

This section describes some computer, graphical user interface (GUI), unit, and animation related terms used in RETAS!PRO.

## Computer terms

### Vector graphics

Generic term for referring to an image format in which shapes such as points, lines, and curves as well as other image characteristics are expressed mathematically. Characteristics of a vector image are, for example:

- 1) Small file size
- 2) Configurable output resolution
- 3) Not memory-intensive

EPS, the format used in Adobe Illustrator, or SWF, the format used in Macromedia Flash are examples of image formats using vector graphics.

### Raster graphics

Generic term for referring to an image format in which an image is expressed as dots with color information arranged horizontally and whose number varies depending on the resolution. Characteristics of an raster image are, for example:

- 1) Good for delicate images such as nature or aquarelle painting
- 2) Easy to add effects
- 3) Versatile
- 4) Relatively easy to process using software

Raster and vector can coexist in the RETAS!PRO HD DGA and CEL formats.

BMP, the format used in Windows, PICT, the format mainly used in Macintosh, and TIFF used in various platforms are examples of image formats using raster graphics.  
In RETAS!PRO, the recommended image format for raster graphics is PNG.

### Explorer

File management software implemented in Windows as standard.

### Finder

File management software implemented in Mac OS as standard.

### Folder path

Location on the disk where a file is stored, normally composed of a volume name, folder name, and filename. Symbols such as slash (/), and colon (:) are often used to separate the volume name, folder name, and filename.

Example: /stylos\_data/

### Extension

Normally, a 3-letter (single byte character) code attached at the end of a filename to indicate the file type.

### Keyboard shortcut (Windows) / Alias (Mac OS)

"Alias" of a file or folder. An alias is not a file in itself, like a copy. In other words, the original file is not deleted even if the alias is. Double clicking the alias opens the original file.

### RGB

Refers to a system for representing colors as a combination of the three primary colors in light: Red (R), Green (G), and Blue (B). You can adjust the color, saturation, and brightness by adjusting the level of each of the primary colors. If 8 bits are used to express the level of a primary color (256 levels) in a pixel, the total number of available colors is 16,777,216 colors (approximately 16.7 million).  
Similarly, if 16 bits are used to express the level of a primary color (65536 levels), many more colors are available.

### HSV

Color expression using Hue, Saturation, and Value.  
HSV allows you to compose colors more intuitively than with RGB.

### a (Alpha), a plane, a channel

a (Alpha) is a transparency information used for compositing images, and a plane is the part of the image file where that information is stored.

### Rasterize

The process for converting an image data in vector format into raster format (bitmap).

### Sort

A reordering of the information in a list based on a given criterion.

### Resolution

Indicates the level of detail of a scanned raster image, a printing, or a monitor. DPI and pixel are examples of units used for expressing resolution.

### Anti-Aliasing

A process that smoothes the jagged edge seen in computer-drawn curves and shapes.

Graphical User Interface (GUI) terms

Thumbnail

A small image of some 10 x 10 pixels used for identifying an image data.

Dialog box

A window in which information that is configurable by the user is shown to prompt user input.

Tab (control)

A GUI for presenting information in groups that is used when the information and/or controls to be shown is large and cannot be arranged in one window or dialog box. Tab is used when there are two or more information and/or controls groups and is selected using an index that is normally located in the upper part of the tab.

Popup menu

A menu that appears when the mouse is clicked in a window or dialog box, and is normally used to select a command, option, or item.

Context menu

A popup menu that appears when the mouse is [right clicked] or [Ctrl] + [clicked] (Macintosh) in a window or dialog box. The menu that appears shows commands or settings that are specific to the location in which the mouse was clicked. Context menu is a menu that is not available for all windows and dialog boxes.

Unit terms

Inch

A unit of length used mainly in the USA. 1 inch = 2.54 cm (25.4 mm)

FPS

Abbreviation of Frame Per Second that represents the number of frames in one second. It is the unit for the frame rate in animation. Films use 24 frames in one second, so their FPS is 24 while for video (NTSC), theirs is 30.

DPI

Abbreviation of Dot Per Inch that represents the number of dots (pixels) in one inch. It is used as the unit for representing the resolution of scanned raster format images, printing, monitors, etc.

Animation terms

Scene

Unit of screen image. Normally, a 30-minute TV animation program is composed of 300 to 400 scenes. In live action, a scene is a series of actions recorded from the time the camera's shutter button is pressed until it is released.

Conventional scene folder

In the production of animations, materials necessary for each scene are managed using a paper container called scene folder. This conventional scene folder is not only used as container but as a record of information such as check status, person in charge, directions, etc. so that they can be conveyed to other processes together with the materials contained.

Sequence number

A "sequence" is similar to a "paragraph" in a document. That is, it is a group of images classified by "scene" or "time".

X-sheet, Sheet

A form for registering the order in which cels are to be arranged in the cel stack as well as the timings.

Color Chart, Chart

A "combination of colors (= set)" to be used in painting.

Story Board

The "project design sheet" where the outline, characters, actions, dialogue, sound effect, and length etc. for each of the sequences/scenes are detailed in order, along the story line.

Layout

The design sheet for the "scene", and therefore drawn before starting with the scene drawing. It is used to check the scene, timing, lighting direction, character/BG arrangement, etc.

Key Drawing, Key

"Key Drawing, Key" is the line drawing of a key movement.

Inbetween

"Inbetween" is an image that results from "inbetweening" which is a process where intermediate positions are drawn so that the movement from one key to the other looks continuous.

Cel

Originally, it referred to an image of a line drawing traced and then painted on celluloid (acetate). In digital painting, it refers to a painted "inbetween".

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Cel number

A sequential number assigned to keys and inbetweens. In computer-assisted key and inbetween drawing, files are named using the cel number.

Color styling

"Color styling" is the process in which colors to be used for painting each of the scenes are determined. Sometimes, "color styling" refers to a written instruction containing directions regarding the colors to be used in painting.

Retake (direction)

Originally, is a term for indicating to "take the film again" (re-take). In the production of animation, however its meaning is wider and means "redoing" (applicable to drawing, finishing, and shooting).

Scene table, Schedule

Forms for managing the progress of an animation production. These forms give you information about "finished processes", "person in charge", "finished date", and "number of cels produced" etc. for each scene.

Frame

(1) A reference that gives the angle of view.  
Examples: "drawing frame", "safety frame", "shooting frame", "painting frame"  
(2) A single image in a video.  
Examples: 5 seconds 10 frames

100Frame

The size of a frame for a scene without camera-work. That is, a frame with a size of 100%. This term is mainly used for specifying the angle of view for a camera-work (Used mainly in Japan).  
Example: T.U. up to 50Frame

12 Field

[12 Field] is the name given to a frame with a "width of 12 inches" and used for a scene without camera-work. This term is mainly used for specifying the angle of view for a camera-work. (Used mainly in USA)  
Example: T.U. up to 6 Field

Safety frame

The picture tube of a TV does not show the whole image recorded in a video because the screen's mask cuts part of the image.  
Due to this, the part of the images that must be shown on the TV screen needs to be drawn at some distance from the borders.  
That is, the part of the images that must be shown on the TV screen must be drawn inside the safety frame.

Shadow markup

A direction for indicating that an area must be painted darker than an "illuminated" area because it is a "shadow", where "shadow" is the area of darkness formed behind an object that blocks the light. Shadow markup is generally done by filling roughly the relevant parts in green.

Transparency markup

A direction for the person(s) in charge of painting to leave a part in the image transparent, that is, without painting. "Transparency markup" is generally done by marking the area with an "x" input manually.

Highlight markup

A direction for indicating that an area must be painted in a special color called "highlight color" because it is a bright area (= highlight). Highlight markup is generally done by filling roughly the relevant parts in yellow.

Color separation (line)

A border between colors; that is, a separation between an "illuminated area (normal color)" and the "shadow (darker color)" when painting the skin, for example. It is generally drawn with a color pencil (other than black). Eventually, it is filled with either the normal or the darker color.

Effects

Abbreviation of "special effects".  
Generally, it refers to operations done during finishing such as "airbrushing".  
It may also refer to the special effects used in shooting.

Light table

A function for showing images semi-transparently in the [Cel] window.  
In RETAS!PRO, the light table is controlled using a [Light Table] palette and used for inbetweening.

Direction

A term that refers to "production".  
In RETAS!PRO, the X-sheet has a column in its upper part for the director to enter directions using text.

Cel BG

A normal BG is drawn on paper and painted with watercolors. "Cel BG" refers to a BG that is drawn based on the inbetweens and have the same finish as the cel.  
It is used as a BG inbetween.

Model sheet

A list of characters used as a guide for drawing.

Center line

A line that passes through the center of a vector line.  
Generally, it is invisible. However, it can be checked on the [Cel] window using the [Show Center Line] command.

Start & End points

[End points] are the points that mark the start or ends of a vector line.

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# TraceMan HD screenshot

**Cel window**

A window for editing (drawing) images. This window is equivalent to the layout paper or inbetween drawing paper used when working with paper.

**Tool Palette**

A palette that is a collection of tools used for drawing, for example.

**File Browser**

A window for browsing image files and managing scene folders.

**Scan Palette**

A palette for setting the standard resolution, brightness, color depth, etc. for scanning.

**Prescan palette**

A palette for showing a preview of the scanner document table.

**File Previewer**

A palette for switching the sequentially numbered files to work with.

**Batch Palette**

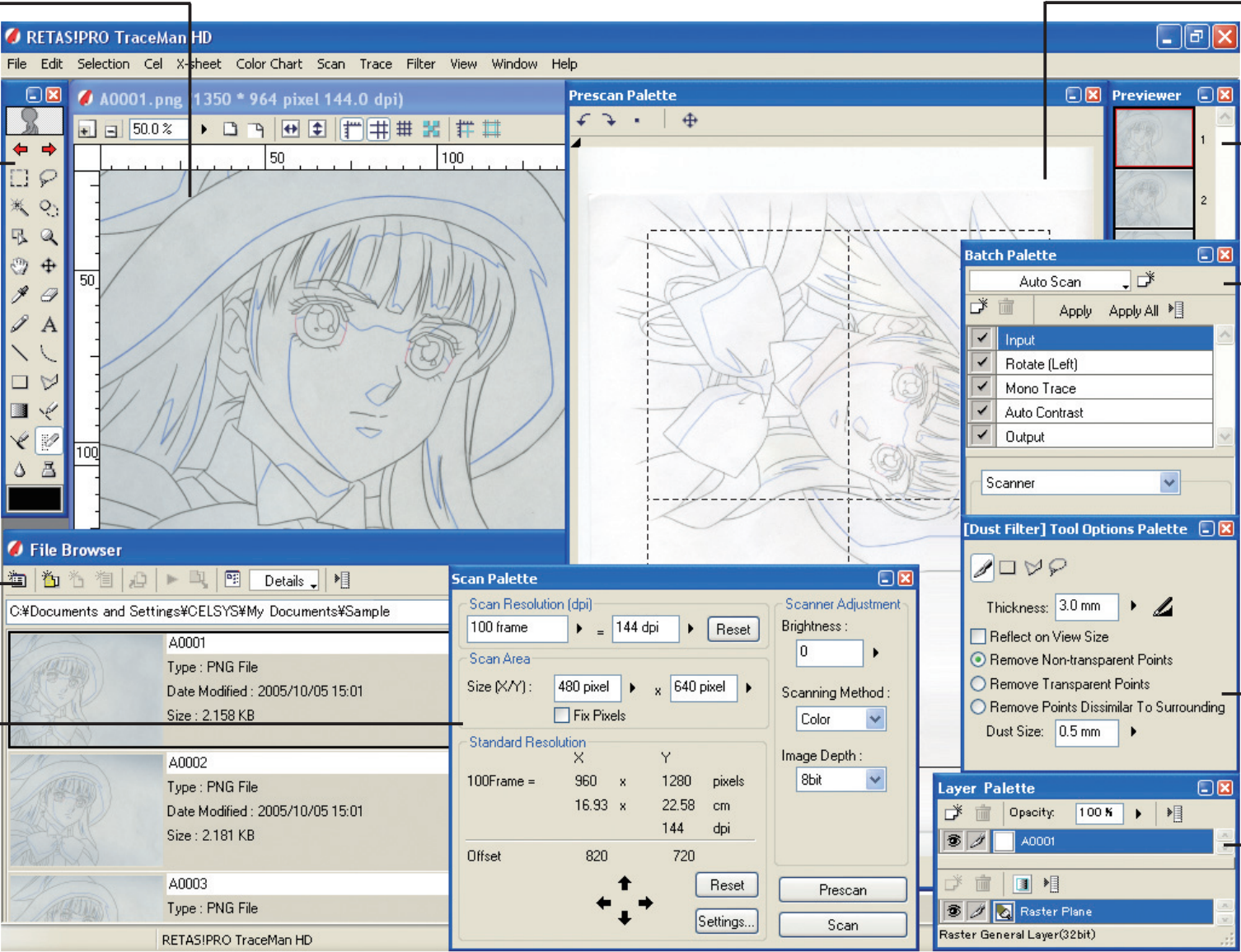
A palette for executing batch processing where the same processing is repeated for multiple data.

**Tool Options Palette**

A palette for setting the options for each of the tools.

**Layer Palette**

A palette for configuring the layer setting, such as the order in which they are to be overlapped, whether a particular layer should be visible or hidden, etc.



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List of commands applicable to TraceMan HD layers

(\*) In one cel, it is only possible to have either mono paint layer, raster paint layer, or vector paint layer.

| Layer                            | Raster<br>general | Mono<br>paint | Gray<br>paint | Vector<br>paint | Text     | Direction<br>text | Direction | Frames | Vanishing<br>Point | Adjustment | Selection |
|----------------------------------|-------------------|---------------|---------------|-----------------|----------|-------------------|-----------|--------|--------------------|------------|-----------|
| Maximum number of layers per cel | Multiple          | 1 (*)         | 1 (*)         | 1 (*)           | Multiple | Multiple          | Multiple  | 1      | Multiple           | Multiple   | Multiple  |
| <b>[Tool Palette]</b>            |                   |               |               |                 |          |                   |           |        |                    |            |           |
| Switching the edit mode          | ○                 | ○             | ○             | ○               | ○        | ○                 | ○         | ○      | ○                  | ○          | ○         |
| Previous Cel                     | ○                 | ○             | ○             | ○               | ○        | ○                 | ○         | ○      | ○                  | ○          | ○         |
| Next Cel                         | ○                 | ○             | ○             | ○               | ○        | ○                 | ○         | ○      | ○                  | ○          | ○         |
| Rectangle selection              | ○                 | ○             | ○             | ○               | ○        | ○                 | ○         | ○      | ○                  | ○          | ○         |
| Lasso                            | ○                 | ○             | ○             | ○               | ○        | ○                 | ○         | ○      | ○                  | ○          | ○         |
| Magic wand                       | ○                 | ○             | ○             | ○               | ×        | ×                 | ○         | ×      | ×                  | ×          | ○         |
| Selection brush                  | ○                 | ○             | ○             | ○               | ○        | ○                 | ○         | ○      | ○                  | ○          | ○         |
| Object selection                 | ○                 | ○             | ○             | ○               | ○        | ○                 | ○         | ○      | ○                  | ○          | ○         |
| Zoom                             | ○                 | ○             | ○             | ○               | ○        | ○                 | ○         | ○      | ○                  | ○          | ○         |
| Hand                             | ○                 | ○             | ○             | ○               | ○        | ○                 | ○         | ○      | ○                  | ○          | ○         |
| Move                             | ○                 | ○             | ○             | ○               | ○        | ○                 | ○         | ○      | ○                  | ○          | ○         |
| Eyedropper                       | ○                 | ○             | ○             | ○               | ×        | ×                 | ○         | ×      | ×                  | ×          | ○         |
| Eraser                           | ○                 | ○             | ○             | ○               | ×        | ×                 | ○         | ×      | ×                  | ×          | ○         |
| Pencil                           | ○                 | ○             | ○             | ×               | ×        | ×                 | ○         | ×      | ×                  | ×          | ○         |
| Text                             | ○                 | ○             | ○             | ○               | ○        | ○                 | ○         | ○      | ○                  | ○          | ○         |
| Line                             | ○                 | ○             | ○             | ○               | ×        | ×                 | ○         | ×      | ×                  | ×          | ○         |
| Curve                            | ○                 | ○             | ○             | ○               | ×        | ×                 | ○         | ×      | ×                  | ×          | ○         |
| Shape                            | ○                 | ○             | ○             | ○               | ×        | ×                 | ○         | ×      | ×                  | ×          | ○         |
| Polyline                         | ○                 | ○             | ○             | ○               | ×        | ×                 | ○         | ×      | ×                  | ×          | ○         |
| Gradient                         | ○                 | ○             | ○             | ○               | ×        | ×                 | ○         | ×      | ×                  | ×          | ×         |
| Join Line                        | ○                 | ○             | ○             | ○               | ×        | ×                 | ○         | ×      | ×                  | ×          | ○         |
| Change Width                     | ○                 | ○             | ○             | ○               | ×        | ×                 | ○         | ×      | ×                  | ×          | ○         |
| Dust Filter                      | ○                 | ○             | ○             | ×               | ×        | ×                 | ○         | ×      | ×                  | ×          | ○         |
| Blur                             | ○                 | ○             | ○             | ×               | ×        | ×                 | ○         | ×      | ×                  | ×          | ○         |
| Stamp                            | ○                 | ○             | ○             | ×               | ×        | ×                 | ○         | ×      | ×                  | ×          | ○         |
| Foreground Ccolor                | ○                 | ○             | ○             | ○               | ○        | ○                 | ○         | ○      | ○                  | ○          | ○         |
| <b>[Edit] menu</b>               |                   |               |               |                 |          |                   |           |        |                    |            |           |
| Undo                             | ○                 | ○             | ○             | ○               | ○        | ○                 | ○         | ○      | ○                  | ○          | ○         |
| Redo                             | ○                 | ○             | ○             | ○               | ○        | ○                 | ○         | ○      | ○                  | ○          | ○         |
| Scene                            | ○                 | ○             | ○             | ○               | ○        | ○                 | ○         | ×      | ×                  | ×          | ○         |
| Copy                             | ○                 | ○             | ○             | ○               | ○        | ○                 | ○         | ×      | ×                  | ×          | ○         |
| Paste                            | ○                 | ○             | ○             | ○               | ○        | ○                 | ○         | ×      | ×                  | ×          | ○         |
| Paste to Selected Plane          | ○                 | ○             | ○             | ○               | ○        | ○                 | ○         | ×      | ×                  | ×          | ○         |
| Convert & Paste                  | ○                 | ○             | ○             | ○               | ○        | ○                 | ○         | ×      | ×                  | ×          | ○         |
| Clear                            | ○                 | ○             | ○             | ○               | ×        | ×                 | ○         | ×      | ×                  | ×          | ○         |
| Select All                       | ○                 | ○             | ○             | ○               | ○        | ○                 | ○         | ○      | ○                  | ○          | ○         |
| Deselect                         | ○                 | ○             | ○             | ○               | ○        | ○                 | ○         | ○      | ○                  | ○          | ○         |
| Reverse Selection                | ○                 | ○             | ○             | ○               | ○        | ○                 | ○         | ○      | ○                  | ○          | ○         |
| Snap → Guide                     | ○                 | ○             | ○             | ○               | ○        | ○                 | ○         | ○      | ○                  | ○          | ○         |
| Snap → Grid                      | ○                 | ○             | ○             | ○               | ○        | ○                 | ○         | ○      | ○                  | ○          | ○         |
| Fill                             | ○                 | ○             | ○             | ○               | ×        | ×                 | ○         | ×      | ×                  | ×          | ○         |
| Replace Line Color               | ○                 | ○             | ○             | ○               | ×        | ×                 | ○         | ×      | ×                  | ×          | ×         |
| Cut Out                          | ○                 | ○             | ○             | ○               | ○        | ○                 | ○         | ○      | ○                  | ○          | ○         |
| Transfer to Plane                | ×                 | ○             | ○             | ×               | ×        | ×                 | ×         | ×      | ×                  | ×          | ×         |
| Repair Line → Join Line          | ○                 | ○             | ○             | ○               | ×        | ×                 | ○         | ×      | ×                  | ×          | ○         |
| Repair Line → Change Width       | ○                 | ○             | ○             | ○               | ×        | ×                 | ○         | ×      | ×                  | ×          | ○         |

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| Layer                                    | Raster<br>general | Mono<br>paint | Gray<br>paint | Vector<br>paint | Text | Direction<br>text | Direction | Frames | Vanishing<br>Point | Adjustment | Selection |
|------------------------------------------|-------------------|---------------|---------------|-----------------|------|-------------------|-----------|--------|--------------------|------------|-----------|
| Transform → Scale                        | ○                 | ○             | ○             | ○               | ×    | ×                 | ○         | ×      | ×                  | ×          | ○         |
| Transform → Free Rotation                | ○                 | ○             | ○             | ○               | ×    | ×                 | ○         | ×      | ×                  | ×          | ○         |
| Transform → Numeric                      | ○                 | ○             | ○             | ○               | ×    | ×                 | ○         | ×      | ×                  | ×          | ○         |
| Transform → Flip Horizontal              | ○                 | ○             | ○             | ○               | ×    | ×                 | ○         | ×      | ×                  | ×          | ○         |
| Transform → Flip Vertical                | ○                 | ○             | ○             | ○               | ×    | ×                 | ○         | ×      | ×                  | ×          | ○         |
| [Selection] menu                         |                   |               |               |                 |      |                   |           |        |                    |            |           |
| Select All                               |                   |               |               |                 |      |                   |           |        |                    |            |           |
| Deselect                                 | ○                 | ○             | ○             | ○               | ○    | ○                 | ○         | ○      | ○                  | ○          | ○         |
| Reverse Selection                        | ○                 | ○             | ○             | ○               | ○    | ○                 | ○         | ○      | ○                  | ○          | ○         |
| Select Foreground Color                  | ○                 | ○             | ○             | ○               | ○    | ○                 | ○         | ○      | ○                  | ○          | ○         |
| Add Foreground Color to Selection        | ○                 | ○             | ○             | ○               | ×    | ×                 | ○         | ×      | ×                  | ×          | ○         |
| Select Other than Foreground Color       | ○                 | ○             | ○             | ○               | ×    | ×                 | ○         | ×      | ×                  | ×          | ○         |
| Select out-of-range color                | ○                 | ○             | ○             | ○               | ×    | ×                 | ○         | ×      | ×                  | ×          | ○         |
| Conversion → Convert Selection To Layer  | ○                 | ○             | ○             | ○               | ×    | ×                 | ○         | ×      | ×                  | ×          | ○         |
| Conversion → Convert Layer To Selection  | ○                 | ○             | ○             | ○               | ○    | ○                 | ○         | ○      | ○                  | ○          | ○         |
| Conversion → Add Layer To Selection      | ×                 | ×             | ×             | ×               | ×    | ×                 | ×         | ×      | ×                  | ×          | ○         |
| Conversion → Delete Layer From Selection | ×                 | ×             | ×             | ×               | ×    | ×                 | ×         | ×      | ×                  | ×          | ○         |
| [Cel] menu                               |                   |               |               |                 |      |                   |           |        |                    |            |           |
| Layer → New...                           |                   |               |               |                 |      |                   |           |        |                    |            |           |
| Layer → Copy                             | ○                 | ○             | ○             | ○               | ○    | ○                 | ○         | ○      | ○                  | ○          | ○         |
| Layer → Delete                           | ○                 | ×             | ×             | ×               | ○    | ○                 | ×         | ×      | ○                  | ○          | ○         |
| Layer → Delete Hidden Layer              | ○                 | ○             | ○             | ○               | ○    | ○                 | ○         | ○      | ○                  | ○          | ○         |
| Layer → Convert...                       | ○                 | ○             | ○             | ○               | ○    | ○                 | ○         | ○      | ○                  | ○          | ○         |
| Layer → Properties...                    | ○                 | ○             | ○             | ○               | ○    | ○                 | ○         | ○      | ○                  | ×          | ○         |
| Layer → Settings...                      | ○                 | ○             | ○             | ○               | ○    | ○                 | ○         | ○      | ○                  | ○          | ○         |
| Plane → New...                           | ×                 | ×             | ×             | ×               | ○    | ○                 | ×         | ○      | ○                  | ○          | ×         |
| Plane → Copy                             | ×                 | ○             | ○             | ○               | ×    | ×                 | ○         | ○      | ×                  | ○          | ×         |
| Plane → Delete Plane                     | ×                 | ×             | ×             | ×               | ×    | ×                 | ○         | ○      | ×                  | ○          | ×         |
| Plane → Convert...                       | ×                 | ○             | ○             | ○               | ×    | ×                 | ○         | ×      | ×                  | ×          | ×         |
| Plane → Properties...                    | ○                 | ○             | ○             | ○               | ×    | ×                 | ×         | ×      | ×                  | ×          | ○         |
| Plane → Settings...                      | ○                 | ○             | ○             | ○               | ○    | ○                 | ×         | ○      | ○                  | ○          | ○         |
| [Filter] menu                            |                   |               |               |                 |      |                   |           |        |                    |            |           |
| Sharpen → Sharpen (Heavy)                |                   |               |               |                 |      |                   | ○         | ×      | ×                  | ×          | ×         |
| Sharpen → Sharpen (Light)                | ○                 | ○             | ○             | ×               | ×    | ×                 | ○         | ×      | ×                  | ×          | ×         |
| Sharpen → Unsharp Mask...                | ○                 | ○             | ○             | ×               | ×    | ×                 | ○         | ×      | ×                  | ×          | ×         |
| Blur → Blur (Heavy)                      | ○                 | ○             | ○             | ×               | ×    | ×                 | ○         | ×      | ×                  | ×          | ×         |
| Blur → Blur (Light)                      | ○                 | ○             | ○             | ×               | ×    | ×                 | ○         | ×      | ×                  | ×          | ×         |
| Blur → Gaussian Blur...                  | ○                 | ○             | ○             | ×               | ×    | ×                 | ○         | ×      | ×                  | ×          | ×         |
| Invert                                   | ○                 | ○             | ○             | ×               | ×    | ×                 | ○         | ×      | ×                  | ×          | ×         |
| Auto Contrast                            | ○                 | ○             | ○             | ×               | ×    | ×                 | ○         | ×      | ×                  | ×          | ×         |
| Contrast/Brightness → Apply              | ○                 | ○             | ○             | ×               | ×    | ×                 | ○         | ×      | ×                  | ×          | ×         |
| Tone Curve → Apply                       | ○                 | ○             | ○             | ×               | ×    | ×                 | ○         | ×      | ×                  | ○          | ×         |
| Level Adjust → Apply                     | ○                 | ○             | ○             | ×               | ×    | ×                 | ○         | ×      | ×                  | ○          | ×         |
| Hue/Saturation → Apply                   | ○                 | ○             | ○             | ×               | ×    | ×                 | ○         | ×      | ×                  | ○          | ×         |
| Color Balance → Apply                    | ○                 | ○             | ○             | ×               | ×    | ×                 | ○         | ×      | ×                  | ×          | ×         |
| Dust Filter                              | ○                 | ○             | ○             | ×               | ×    | ×                 | ○         | ×      | ×                  | ×          | ○         |

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| Layer                                       | Raster<br>general | Mono<br>paint | Gray<br>paint | Vector<br>paint | Text | Direction<br>text | Direction | Frames | Vanishing<br>Point | Adjustment | Selection |
|---------------------------------------------|-------------------|---------------|---------------|-----------------|------|-------------------|-----------|--------|--------------------|------------|-----------|
| <b>Output Layers (for layer conversion)</b> |                   |               |               |                 |      |                   |           |        |                    |            |           |
| Raster general                              | ×                 | ○             | ○             | ○               | ○    | ○                 | ○         | ○      | ○                  | ×          | ○         |
| Mono paint                                  | ○                 | ×             | ○             | ○               | ×    | ×                 | ×         | ×      | ×                  | ×          | ○         |
| Gray paint                                  | ○                 | ○             | ×             | ○               | ×    | ×                 | ×         | ×      | ×                  | ×          | ○         |
| Text                                        | ×                 | ×             | ×             | ×               | ×    | ×                 | ×         | ×      | ×                  | ×          | ×         |
| Direction text                              | ×                 | ×             | ×             | ×               | ×    | ×                 | ×         | ×      | ×                  | ×          | ×         |
| Direction                                   | ○                 | ○             | ○             | ○               | ○    | ○                 | ×         | ○      | ○                  | ×          | ○         |
| Frames                                      | ×                 | ×             | ×             | ×               | ×    | ×                 | ×         | ×      | ×                  | ×          | ×         |
| Vanishing Point                             | ×                 | ×             | ×             | ×               | ×    | ×                 | ×         | ×      | ×                  | ×          | ×         |
| Adjustment                                  | ×                 | ×             | ×             | ×               | ×    | ×                 | ×         | ×      | ×                  | ×          | ×         |
| Selection                                   | ×                 | ×             | ×             | ×               | ×    | ×                 | ×         | ×      | ×                  | ×          | ×         |
| <b>Retainable planes</b>                    |                   |               |               |                 |      |                   |           |        |                    |            |           |
| Raster plane                                | ○                 | ○             | ○             | ○               | ×    | ×                 | ○         | ×      | ×                  | ×          | ×         |
| Outline                                     | ×                 | ○             | ○             | ○               | ×    | ×                 | ×         | ×      | ×                  | ×          | ×         |
| Painting                                    | ×                 | ○             | ○             | ×               | ×    | ×                 | ×         | ×      | ×                  | ×          | ×         |
| Coloring plane                              | ×                 | ×             | ×             | ○               | ×    | ×                 | ×         | ×      | ×                  | ×          | ×         |
| Color Separation Line                       | ×                 | ×             | ×             | ○               | ×    | ×                 | ×         | ×      | ×                  | ×          | ×         |
| Text                                        | ×                 | ×             | ×             | ×               | ○    | ○                 | ×         | ×      | ×                  | ×          | ×         |
| Shooting Frame                              | ×                 | ×             | ×             | ×               | ×    | ×                 | ×         | ○      | ×                  | ×          | ×         |
| Vanishing Point                             | ×                 | ×             | ×             | ×               | ×    | ×                 | ×         | ×      | ○                  | ×          | ×         |
| Adjustment                                  | ×                 | ×             | ×             | ×               | ×    | ×                 | ×         | ×      | ×                  | ○          | ×         |
| Selection                                   | ×                 | ×             | ×             | ×               | ×    | ×                 | ×         | ×      | ×                  | ×          | ○         |

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# TraceMan HD User's Manual

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